I have stopped checking this FAI until page 26. You have to submit a corrected FAI report that respects EN9102 requirement !
I put some comments but there could be more errors.
Please make sure to separate the assy FAI report from the detail FAI
If you have any question don't hesitate to contact me.

NON APPROUVÉ

PROJECT : A350 XWB (BOTTOM PANEL)
PART NO : V57467056 000 00
DESCRIPTION: D. NOSE PANEL 5 ASSY - LH
SERIAL NO : 0024
PART ISSUE : -A.2

FAI DATA PACK :

1.	COVER SHEET	√
2.	FORM 1	√
3.	FORM 2	√
4.	FORM 3	√
5.	PAINTING INSPECTION REPORT	√
6.	MECHANICAL ASSY INSPECTION REPORT	√
7.	WORK INSTRUCTION (W/I)	√
8.	DRAWING	√
9.	WEIGHT REPORT	√

Prepared by:	Checked by:
(Signature/stamp & date)	*(Signature/stamp & date)*
AC 106 INSP 17/10/14	AC 44 QA 20/10/14
Name: IZZATE BINTI KHASBULLAH	Name: AMINAH BT KAMALLUDIN
Quality Inspector	*Quality Engineer*

CTRM
AeroComposites

CERTIFICATE OF CONFORMITY

Cert. No: CTRMAC-14-3383
Revision A

Customer: SONACA SA, RUE DES CERISIERS, B6041 GOSSELIES	SONACA PO No: **4500175924** Order Date: **18.02.2014**

No	Description	Batch / Serial No	Qty	Additional Information
1	A350XWB BOTTOM PANEL (Composite Panels)	Refer Annex A	10 PCS	**Note:** 1) Detail panels manufactured according to new drawing. 2) First Article Part (FAI) Detail in Annex B 3) List of Non conformity Part Detail in Annex C 4) CTRMAC-14-3383 Revision A superseded CTRMAC-14-3383 due to changing of Line Item on Annex A

Supplied by: CTRM Aero Composites Sdn Bhd Batu Berendam, Melaka 75350 Malaysia	Vendor ID: 17995 SONACA Approval No.: SONACA/MP&SAO/TYDG/060622.01

Certified that the whole of supplies detailed hereon have been manufactured, inspected, tested and unless otherwise stated above conform in all respects to the specification drawings and contract/order relevant thereto. The Quality management system arrangements in respect of these supplies comply with the requirements of AS/EN 9100.

For and on behalf of: CTRM Aero Composites Sdn Bhd.

AC 44 QA	Program Quality Engineer	3th November 2014
(Signature and Stamp)	Position	Date

ANNEX A

MSN 0021

NO	LINE ITEM	PART NUMBER	DESCRIPTION	ASSY SERIAL NO	PART LIST
1	0270	V57466016 002 00	BOTTOM PANEL 1 ASSY LH	A350S-0191-0023	-C.2
2	0280	V57466016 003 00	BOTTOM PANEL 1 ASSY RH	A350S-0192-0023	-C.2
3	0290	V57466026 002 00	BOTTOM PANEL 2 ASSY LH	A350S-0193-0021	-C.2
4	0300	V57466026 003 00	BOTTOM PANEL 2 ASSY RH	A350S-0194-0022	-C.2
5	0310	V57466036 002 00	BOTTOM PANEL 3 ASSY LH	A350S-0195-0023	-C.2
6	0320	V57466036 003 00	BOTTOM PANEL 3 ASSY RH	A350S-0196-0022	-C.2
7	0330	V57466046 002 00	BOTTOM PANEL 4 ASSY LH	A350S-0197-0023	-C.2
8	0340	V57466046 003 00	BOTTOM PANEL 4 ASSY RH	A350S-0198-0024	-C.2
9	0110	V57467056 000 00	BOTTOM PANEL 5 ASSY LH	A350S-0205-0024	-A.2
10	0120	V57467056 001 00	BOTTOM PANEL 5 ASSY RH	A350S-0206-0025	-A.2

ANNEX B: First Article Inspection (FAI)

Part Description	Part number	Serial Number	FAI REPORT NO
BOTTOM PANEL 5 LH	MOLD NO: V57467051 000 00 ECN: -A.2 ASSY NO: V57467056 000 00 ECN: -A.2	MOLD NO: A350S-0203-0027 ASSY NO: A350S-0205-0024	MOLDED NO: CTRMAC-FAI/SONACA/DN-127 ASSY NO: CTRMAC-FAI/SONACA/DN-128
BOTTOM PANEL 5 RH	MOLD NO: V57467051 001 00 ECN: -A.2 ASSY NO: V57467056 001 00 ECN: -A.2	MOLD NO: A350S-0203-0030 ASSY NO: A350S-0205-0025	MOLDED NO: CTRMAC-FAI/SONACA/DN-129 ASSY NO: CTRMAC-FAI/SONACA/DN-130

ANNEX C: List Non-conformity Part

PART DESCRIPTION	PART NUMBER	SERIAL NUMBER	NCR NO
BOTTOM PANEL 5 LH	MOLD NO: V57467051 000 00 ASSY NO: V57467056 000 00	MOLD NO: A350S-0203-0027 ASSY NO: A350S-0205-0024	CTRM NCR NO: E-11897 SONACA REPORT NO: 201403338 CUSTOMER NCR NO: SA-004605256 ISSUE: OML surface profile out of tolerance STATUS: Close Disposition: Use as it
BOTTOM PANEL 5 RH	MOLD NO: V57467051 001 00 ASSY NO: V57467056 001 00	MOLD NO: A350S-0204-0030 ASSY NO: A350S-0206-0025	CTRM NCR NO: E-11896 SONACA REPORT NO: 201403337 CUSTOMER NCR NO: SA-004605203 ISSUE: OML surface profile out of tolerance STATUS: Close Disposition: Use as it

CTRM aero composites	**FAIR Cover Sheet**	**FAI Report Number:** CTRMAC-FAI/SONACA/DN-128
		Purchase Order No: 4500175924
		Prepared for (Customer): SONACA
		Date: 03 SEPTEMBER 2014

SUPPLIER COMPANY INFORMATION		
Supplier Name: CTRM AERO COMPOSITES	**Telephone No.:** 06 3171007	
Address: Batu Berendam, 75350 Melaka,Malaysia		
PART / KIT INSPECTED		
Program/ Project: A350 XWB SONACA	**Product Specification No:** N/A	
Part/ Kit Number: V57467056 000 00	**Drawing Issue:** -A.2	**Part Issue:** -A.2
Part Description: D. NOSE PANEL 5 ASSY - LH	**Build Standard:** N/A	
	Job Order No.: A350S-0205-0024	
Part Serial No.: 0024		

Type of First Article Inspection (Tick as appropriate):	**Full First Article Review**	√	**Partial First Article Review**	

Reason for Full FAI/ Partial FAI: NEW MOD MSN 021 AS DRAWING SET VERSION –A.2.

SUBJECTS FOR VERIFICATION	ACCEPT	NOT ACCEPT	N/A	REMARKS
SECTION A: PRIOR of FIRST ARTICLE VERIFICATION				
PO/ Condition of Supply (CoS)	☒	☐	☐	4500175924
Configuration (Drawing, Model, Ply development etc.)	☒	☐	☐	DT-CDI-1275-13-9 (CUSTOMER REFERENCE &CM 0591-13 CTRM NO.
Manufacturing & Inspection Planning	☐	☐	☒	
Tool Thermal Survey Report	☐	☐	☒	
Manufacturing Tech Sheet/ CMR	☒	☐	☐	ISSUE 3
Non-destructive Test (Tech. Sheet, Ref. Panel etc.)	☒	☐	☐	CTRMAC-SONACA-TECH 0004/0006
Qualification (e.g. FPQ, Process, etc.)	☐	☐	☒	
SDR/ DPD & MBD	☐	☐	☒	
ATP (Consent given by customer to proceed manufacturing if any above item is unacceptable)	☐	☐	☒	
SECTION B: FIRST ARTICLE VERIFICATION				
Purchase Order	☒	☐	☐	
Configuration (Drawing, Model, Ply development etc.)	☒	☐	☐	
Material Verification	☒	☐	☐	
Planning	☒	☐	☐	
Tooling & Equipment	☒	☐	☐	
Processing	☒	☐	☐	
Specification Compliance	☒	☐	☐	
Heat Treatment	☐	☐	☒	
Non-destructive Test (NDT) & In-Process Test (IPT)	☒	☐	☐	
Dimensional Inspection	☒	☐	☐	
ICY	☐	☐	☒	
Surface Finish	☒	☐	☐	
Weight Report	☒	☐	☐	
Identification	☒	☐	☐	
Non conforming issues closure	☐	☐	☒	

Remarks:

(Justify if any verification item above is unacceptable/ incomplete but accepted by customer for delivery/ next process, e.g.: ATS, PTS, CTS etc,- attach with this form)

Has First Article certification been achieved?		**Yes**	√	**No**	Tick as appropriate
Is the item acceptable for use?	√	**Yes**		**No**	Tick as appropriate

Prepared by: (Supplier QC Inspector's signature and stamp)	AC 106 INSP	**Approved by:** (Supplier Quality Representative's signature and date)	AC 44 QA 3/11/14
	Name: IZZATE BINTI KHASBULLAH		**Name:** AMINAH BT KAMALLUDIN

SAE AS9102 Revision A

Form 1: Part Number Accountability

Sheet 1 of _1__

1. Part Number V57467056 000 00	2. Part Name D. NOSE PANEL 5 ASSY - LH	*3. Serial Number* *0024*	4. FAI Report Number CTRMAC-FAI/SONACA/DN-128
5. Part Revision Level *-A.2*	*6. Drawing Number* *V57467056*	*7. Drawing revision level* *A.2*	*8. Additional Changes* *N/A*
9. Manufacturing Process Reference Work order A350S-0205-0024 (WOR)	10. Organization Name CTRM Aero Composites SDN.BHD	11. Supplier Code 17995	12. P.O Number 4500175924
13. Detail FAI ☐ Assembly FAI ☒	14. Full FAI ☒ Partial FAI ☐ *Reason for Full FAI:NEW MOD MSN 021 AS DRAWING SET*	*Baseline Part Number including revision level*	

Please specify which item of this PO

a) if above part number is detail part only, go to Field 19
b) if above part number is an assembly, go to "INDEX" section below.

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number	*16. Part Name*	*17. Part Serial Number*	18. FAI Report Number
V57467051 000 00	D. NOSE PANEL 5 - LH	0027	CTRMAC-FAI/SONACA/DN-127
V57466092 202	LIP SEAL BRACKET	0024	CTRMAC-FAI/SONACA/DN-128
V00066095 200	LOWER LIP SEAL	0024	CTRMAC-FAI/SONACA/DN-128
NSA 5067-06-1	NUT,CLIP,STEEL CD-PLATED	0024	CTRMAC-FAI/SONACA/DN-128
NAS1102C06-9A	SCREW.100D HEAD,T16AL4V,AL-RBC	0024	CTRMAC-FAI/SONACA/DN-128
ABS1734C4V030M	STUD,AL-IVD	0024	CTRMAC-FAI/SONACA/DN-128
ABS1734C4V050M	STUD,AL-IVD	0024	CTRMAC-FAI/SONACA/DN-128
ABS -0970-61	IDENTIFICATION PLATE	0024	CTRMAC-FAI/SONACA/DN-128
ABS 1763C4P04	GROMMET,QUICK RELEASE,CES PASSIVATED	0024	CTRMAC-FAI/SONACA/DN-128

As per EN9102, you should only put s/n of the part that is installed in the assembly, when applicable. for these you can put "N/A" instead of writing assy s/n: 0024

1) Signature indicates that all characteristic are accounted for; meet drawing requirements or are properly documented for disposition.

2) Also indicate if the FAI is complete per Section 5.4: ☒ FAI complete ☐ FAI not complete

19. Signature	IZZATE BINTI KHASBULLAH	20. Date 03 November 2014
21. Reviewed by	AMINAH BT KAMALLUDIN AC 44 QA	22. Date 3 Nov 14
23. Customer Approval		24. Date

SAE AS9102 Revision A

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es), Functional Testing

1. Part Number V57467056 000 00	2. Part Name D. NOSE PANEL 5 ASSY - LH		3. Serial Number 0024		4. FAI Report Number CTRMAC-FAI/SONACA/DN-128
5. Material or Process Name	*6. Specification Number*	7. Code	*8. Special Process Supplier Code*	*9. Customer Approval Verification (Yes/No/NA)*	*10. Certification of Conformance Number*
STUD	ABS1734C4V030M	N/A	AUK/SA/30158	YES	GR 322498
STUD	ABS1734C4V050M	N/A	AUK/SA/30158	YES	GR 261130
GROMMET SLEEVE	ABS1763C4P-03	N/A	AUK/SA/30158	YES	GR 295370
OMMET SLEEVE	ABS1763C4P-04	N/A	AUK/SA/30158	YES	GR 322501
BAR CODE LABEL	ABS0970-61	N/A	300132	YES	GR 285233
NUT,CLIP ,STEEL CD-PLATED	NSA5067-06-01	N/A	AUK/SA/30158	YES	GR 308253
LIP SEAL BRACKET	V57466092 202	N/A	CSP	YES	GR 324430
LOWER LIP SEAL	V00066095 200	N/A	CSP	YES	GR 327986
SCREW,100D HEAD,T16AL4VAL-RBC	NAS1102V06-9A	N/A	AUK/SA/30158	YES	GR 304664
PU 66 BOUCHE PORES	AIMS 04-04-011	N/A	100432	YES	GR 293126
PU 66 ACTIVATOR	AIMS 04-04-011	N/A	100432	YES	GR 293127
PU 66 THINNER	AIMS 04-04-012	N/A	AUK/SA/30069	YES	GR 280269
POLYURETHANE VARNISH AERODUR CLEARCOAT UVR	AIMS 04-04-012	N/A	204781	YES	GR 274185
`RDENER S66/22R	AIMS 04-04-002	N/A	204781	YES	GR 268727
ADHESION PROMOTER MC115 (KIT25)	AIMS 04-05-012	N/A	301183	YES	GR 315365
CHROM-FREE PRIMER BASE AERODUR BARRIER 37045	AIMS 04-04-002	N/A	204781	YES	GR 318917
ANTI STATIC PAINT THIN THINNER (C 25/90 S0	AIMS 04-04-0012	N/A	AUK/SA/30069	YES	GR 318921
TOP COAT HARDENER HARDENER 90150	AIMS 04-04-031	N/A	AUK/SA/30168	YES	GR 300026
TOP COAT ACTIVATOR ACTIVATOR 99322	AIMS 04-04-031	N/A	AUK/SA/30168	YES	GR 300473
11. Functional Test Procedure Number	**12. Acceptance report number, if applicable**				
N/A	N/A				
13. Comments					
14. Prepared By IZZATE BINTI KHASBULLAH			15. Date 03 SEPTEMBER 2014		

SAE AS9102 Revision A

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es), Functional Testing

Sheet 2 of _3__

1. Part Number V57467056 000 00	2. Part Name D. NOSE PANEL 5 ASSY - LH		3. Serial Number 0024		4. FAI Report Number CTRMAC-FAI/SONACA/DN-128
5. Material or Process Name	*6. Specification Number*	7. Code	*8. Special Process Supplier Code*	*9. Customer Approval Verification (Yes/No/NA)*	*10. Certification of Conformance Number*
ANTI ABRASION PAINT-BASE CA9100	AIMS 04-04-007	N/A	AUK/SA/30069	YES	GR 284425
ANTI ABRASION PAINT-ACTI CA8000B	AIMS 04-04-007	N/A	AUK/SA/30069	YES	GR 284426
ANTI ABRASION PAINT-'IN CA8000C2	AIMS 04-04-007	N/A	AUK/SA/30069	YES	GR 277538
AVIOX 77702 BASE (WHITE M8002)	AIMS 04-04-031	N/A	204781	YES	GR 320106
AVIOX CF37124 BASE	AIMS 04-04-031	N/A	204781	YES	GR 314017
HS92245 HARDENER	AIMS 04-04-031	N/A	204781	YES	GR 310286
FAYING SEALANT SURFACE SEALANT MC780 C4 TECHKIT 130	AIMS 04-05-012	N/A	301183	YES	GR 315367
PFSR (CLEANING SOLVENT) ABR9-0140	ABR9-0140	N/A	N/A	YES	GR 316850
CLEANING WITH LIQUID NON AQUEOUS AGENTS INCLUDING VAPOUR PHASE	AIPS 09-01-002 AIPI 09-01-002	N/A	10204	YES	N/A
APPLICATION OF EXTERNAL PAINT SYSTEMS	AIPS 05-02-003 AIPI 05-02-003	N/A	10204	YES	ME 1261632
PROCESS FOR THE MANUFACTURE OF FORM-IN-PLACE SEALS USING SEALANT	AIPS 05-05-005 AIPI 05-05-005	N/A	10204	YES	ME 1261632
ALING OF AIRCRAFT , RUCTURE	AIPS 05-05-001 AIPI 05-05-001	N/A	10204	YES	N/A
INSTALLATION AND PROTECTION OF LABELS	AIPS 07-06-007 AIPI 07-06-007	N/A	10204	YES	ME 1261632
WETTABILITY TEST	AITM 1-0022	N/A	10204	YES	N/A
Installation of Parallel Shank Threaded Fasteners	AIPS 01-02-022	N/A	10204	YES	N/A
Manual fastening of 2-or 4-start quick release fasteners with or without acres sleeves.	AIPS 01-03-002	N/A	10204	YES	N/A
Installation of Metallic Inserts (Acres sleeves)	AIPS 01-003-005	N/A	10204	YES	N/A
11. Functional Test Procedure Number	**12. Acceptance report number, if applicable**				
N/A	N/A				
13. Comments					
14. Prepared By IZZATE BINTI KHASBULLAH			15. Date 03 SEPTEMBER 2014		

SAE AS9102 Revision A

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es), Functional Testing

Sheet 3 of _3__

Please provide traceability # of the tool

1. Part Number V57467056 000 00	2. Part Name D. NOSE PANEL 5 ASSY - LH		3. Serial Num 0024		l Report Number CTRMAC-FAI/SONACA/DN-128
5. Material or Process Name	*6. Specification Number*	7. Code	*8. Special Process Supplier Code*	*9. Customer Approval Verification (Yes/No/NA)*	*10. Certification of Conformance Number*
Torque tightening of screws,bolts and nuts	AIPS-01-02-008	N/A	10204	YES	N/A
Rework of paints on metallic and non-metallic structural parts	AIPS-05-02-011	N/A	10204	YES	N/A

If rework of paint has been performed on this part, please provide record or reference number of the work instruction

11. Functional Test Procedure Number	12. Acceptance report number, if applicable
N/A	N/A

13. Comments

14. Prepared By	15. Date
IZZATE BINTI KHASBULLAH	03 SEPTEMBER 2014

Change reason : NEW COLOUR CHART REQUEST BY AIRBUS, INCONSISTENCE BETWEEN PLY TABLE ON DRAWING AND 3D MODEL.

Change description :

INTRODUCED MOD 104432 (WHITE COLOR).

----- ONLY FOR SONACA SIDE -----

3D models WRF updated :

WE HAVE TWO PLY 8 AND 9 ON PLIES GROUP 1 AND PLIES GROUP 2

- RENAME PLY 8 BY PLY 10
- RENAME PLY 9 BY PLY 11
- RENAME PLY 10 BY PLY 12
- RENAME PLY 11 BY PLY 13
- RENAME PLY 12 BY PLY 14
- RENAME PLY 13 BY PLY 15
- RENAME PLY 14 BY PLY 16
- RENAME PLY Tedlar BY PLY 18 Tedlar
- RENAME PLY A.1 BY A2
- RENAME PLY 17 BY A1
- RENAME PLY A2 BY A1
- RENAME PLY A18 BY A2

ON BOM :

ADD G006, FN070

DN1596 AIRBUS CODE 006 BECOME 060

DELETE FN0004

DN0688 "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < CA9100, M9001 > " REPLACED BY "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < WHITE M8002 ACCORDING TO CODE NA008 >"

DN0689 "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < AVIOX FINISH 77702, M9001 >" REPLACED BY "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < WHITE M8002 ACCORDING TO CODE NA005 >"

DN0698 NOT APPLICABLE.

FOR ALL SHEET :

ADD BOX COMPONENT OF ICY PART, AND NOTE NOTE 70

SHEET 1 :

SECTION A1-A1 REMOVE NOTE FOR DN0698

DETAIL T1-1 REMOVE NOTE FOR DN0698
DETAIL V1-1 REMOVE NOTE FOR DN1596
SHEET 4 :
DELETE OPTIONAL MARKING, CHANGE MARKING : WAS - > T / IS - > B
SHEET 7 :
COMPOSITE ENGINEERING REQUIREMENTS ADDITIONAL SHEET REPLACED BY COMPOSITE ENGINEERING REQUIREMENTS SHEET

Drawing Modifications[1]

Type	Number	Proposal	Description	Start Msn[2]
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION	21

Picture sheets

Status	Number	Revision
R	1	002
R	2	002
R	3	002
R	4	002
R	5	002
R	6	002
R	7	002

V57467051000

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467051000	000	BOTTOM PANEL 5	unchanged		V57467051000	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	010	V57467051010	SKIN PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		SEERK

Notes

Status	Code
C	DN 0066 [006]
S	DN 0684 [060]
R	DN 0688 [061]
R	DN 0689 [062]
S	DN 0698 [063]
R	DN 1596 [060]
R	FN 0004 [070]

V57467051001

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467051001	001	BOTTOM PANEL 5	unchanged		V57467051001	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	011	V57467051011	SKIN PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		SEERK

Notes

Status	Code
C	DN 0066 [006]
S	DN 0684 [060]
R	DN 0688 [061]
R	DN 0689 [062]

SONACA S.A.

Drawing Set Number :	V57467051	Drawing Set Version :	- A2	Maturity :	APPROVED_STEP2	Drawing Set Description :	BOTTOM PANEL 5	ECN
Program Work Package :	A350 LE - SLAT	Index ECN :	000	Format ECN :	3	Extracted date :	2013-10-07	Approved date : 2013-10-07

Status	Code
S	DN 0698 [063]
R	DN 1596 [060]
R	FN 0004 [070]

V57467051010

Part Information

Status	Part Number	Item [1]	Description [1]	Weight [1]	ICY (Class-Index) [1]	Old Part Number	Old Version	Proposal Stock Disposition [1]
R	V57467051010	010	SKIN PANEL 5	unchanged		V57467051010	-A1	UNAFFECTED

V57467051011

Part Information

Status	Part Number	Item [1]	Description [1]	Weight [1]	ICY (Class-Index) [1]	Old Part Number	Old Version	Proposal Stock Disposition [1]
R	V57467051011	011	SKIN PANEL 5	unchanged		V57467051011	-A1	UNAFFECTED

REFERENCE ONLY

[1] : This data is for information only until 'APPROVED STEP2' Maturity
[2] : This data is for information only

C : creation R : revision A : added D : decreased M : moved L : limited S : suppressed

SONACA S.A.	Drawing Set Number : V574 67051	Drawing Set Version : -A.3	Maturity : APPROVED_STEP2	Drawing Set Description : BOTTOM PANEL 5	PL
	Index PL : 003	Format PL : 7	Extracted date : 2014-03-06	Approved date : 2014-03-06	

Drawing Modifications[1]

Type	Number	Proposal	Description
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION

V574 67051 000

Part Information

Item[1]	Part Number	Version	Description[1]	Weight (kg)[1]	Weight Category	Criticity Class	ICY Class
000	V574 67051 000	-A.3	BOTTOM PANEL 5	5.4242	C	2S	N/A : NOT SPARES

ICY Reference[1]	ICY Index[1]

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01R02	v5	DRW	1	-A.3	003	1	BOTTOM PANEL 5	
02D18	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	
03D18	v5	DRW	3	-A.3	003	1	BOTTOM PANEL 5	REFERENCE ONLY

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	T : MARKING WITH INDELIBLE INK (BY HAND, OR RUBBER STAMP)	106	SEERK

BASIC Notes : 116 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0291	-A.1	001	N	ACTIVE	ALL	PERMANENT MARKING WITH INK PER AIPS 08-03-002
DN 0863	-A.1	002	N	ACTIVE	ALL	MANUFACTURE OF SANDWICH PARTS WITH THERMOSETTINGS FIBER REINFORCED SKINS ACCORDING TO AIPS 03-02-018
DN 0877	-A.1	003	N	ACTIVE	ALL	MACHINING OF FIBER REINFORCED PLASTIC COMPONENTS ACCORDING TO AIPS 03-07-002
DN 0986	-A.1	004	N	ACTIVE	ALL	INSPECTION OF COMPOSITE PARTS ACCORDING TO CER < SEE DRAWING SHEETS >
DN 0987	-A.1	005	N	ACTIVE	ALL	REWORK OF COMPOSITE MONOLITHIC AND SANDWICH PARTS PER AIPS 03-08-003

CTRM AC
MASTER COPY
ORIGINAL COPY WHEN IN RED INK STAMP

PROTECTION Notes : 204 D

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0066	-A.2	006	N	ACTIVE	ALL	SEERK: < NA001+NA005+NA008+NA019+FA048 >
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003
DN 0688	-A.2	061	Y	ACTIVE	ALL	APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < WHITE M8002 ACCORDING TO CODE NA008 >
DN 0689	-A.2	062	Y	ACTIVE	ALL	APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < WHITE M8002 ACCORDING TO CODE NA005 >
~~DN 0698~~	~~-A.1~~	~~063~~	~~Y~~	NOT APPLICABLE	~~ALL~~	~~APPLICATION OF STRUCTURAL PAINTS ACCORDING TO AIPS 05-02-009~~
DN 1592	-A.1	064	Y	ACTIVE	ALL	FORMED-IN PLACE GASKETS SEALING ACCORDING TO CODE < FA048 >
DN 1596	-A.2	060	Y	ACTIVE	ALL	PRESERVATION OF CFRP THERMOSET MATERIAL CUT EDGES ACCORDING TO CODE NA019

REFERENCE ONLY

RECEIVED
16 OCT 2014
cno334-14

[1] : This data is for information only until 'APPROVED STEP2' Maturity

DIVERS Notes : DIVERS

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0672	-A.1	065	Y	ACTIVE	ALL	DO NOT PAINT THIS AREA

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.1	067	Y	ACTIVE	ALL	DO NOT FILL DRAIN HOLE.
FN 0002	-A.1	068	Y	ACTIVE	ALL	REFER TO THE 3D MODEL FOR REFERENCE.
FN 0003	-A.1	069	Y	ACTIVE	ALL	FOR INFORMATION. TOLERANCE TO BE RESPECTED AFTER SLEEVE INSTALLATION IS DIA 0,3mm.
FN 0004	-A.2	070	Y	ACTIVE	ALL	CMPTD V57467056
FN 0006	-A.1	063	Y	ACTIVE	ALL	THE APPLICATION OF EDGE SEALING THINNER THAN 0,2mm IS ALLOWED.

Components

Item	Zone	Quantity	Part Number	Description
010	02B11	1	V574 67051 010	SKIN PANEL 5
220	02D13	1	V574 67051 220	HONEYCOMB

V574 67051 001

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
001	V574 67051 001	-A.3	BOTTOM PANEL 5	5.4242	C	2S	N/A : NOT SPARES

ICY Reference [1]	ICY Index [1]

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01R02	v5	DRW	1	-A.3	003	1	BOTTOM PANEL 5	
02D18	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	
03D18	v5	DRW	3	-A.3	003	1	BOTTOM PANEL 5	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	T : MARKING WITH INDELIBLE INK (BY HAND, OR RUBBER STAMP)	106	SEERK

BASIC Notes : 116 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0291	-A.1	001	N	ACTIVE	ALL	PERMANENT MARKING WITH INK PER AIPS 08-03-002
DN 0863	-A.1	002	N	ACTIVE	ALL	MANUFACTURE OF SANDWICH PARTS WITH THERMOSETTINGS FIBER REINFORCED SKINS ACCORDING TO AIPS 03-02-018
DN 0877	-A.1	003	N	ACTIVE	ALL	MACHINING OF FIBER REINFORCED PLASTIC COMPONENTS ACCORDING TO AIPS 03-07-002
DN 0986	-A.1	004	N	ACTIVE	ALL	INSPECTION OF COMPOSITE PARTS ACCORDING TO CER < SEE DRAWING SHEETS >
DN 0987	-A.1	005	N	ACTIVE	ALL	REWORK OF COMPOSITE MONOLITHIC AND SANDWICH PARTS PER AIPS 03-08-003

[1] : This data is for information only until 'APPROVED STEP2' Maturity

PROTECTION Notes : 204 D

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0066	-A.2	006	N	ACTIVE	ALL	SEERK: < NA001+NA005+NA008+NA019+FA048 >
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003
DN 0688	-A.2	061	Y	ACTIVE	ALL	APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < WHITE M8002 ACCORDING TO CODE NA008 >
DN 0689	-A.2	062	Y	ACTIVE	ALL	APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < WHITE M8002 ACCORDING TO CODE NA005 >
~~DN 0698~~	~~-A.1~~	~~063~~	~~Y~~	NOT APPLICABLE	~~ALL~~	~~APPLICATION OF STRUCTURAL PAINTS ACCORDING TO AIPS 05-02-009~~
DN 1592	-A.1	064	Y	ACTIVE	ALL	FORMED-IN PLACE GASKETS SEALING ACCORDING TO CODE < FA048 >
DN 1596	-A.2	060	Y	ACTIVE	ALL	PRESERVATION OF CFRP THERMOSET MATERIAL CUT EDGES ACCORDING TO CODE NA019

DIVERS Notes : DIVERS

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0672	-A.1	065	Y	ACTIVE	ALL	DO NOT PAINT THIS AREA

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.1	067	Y	ACTIVE	ALL	DO NOT FILL DRAIN HOLE.
FN 0002	-A.1	068	Y	ACTIVE	ALL	REFER TO THE 3D MODEL FOR REFERENCE.
FN 0003	-A.1	069	Y	ACTIVE	ALL	FOR INFORMATION. TOLERANCE TO BE RESPECTED AFTER SLEEVE INSTALLATION IS DIA 0,3mm.
FN 0004	-A.2	070	Y	ACTIVE	ALL	CMPTD V57467056
FN 0006	-A.1	063	Y	ACTIVE	ALL	THE APPLICATION OF EDGE SEALING THINNER THAN 0,2mm IS ALLOWED.

Components

Item	Zone	Quantity	Part Number	Description
011	02B11	1	V574 67051 011	SKIN PANEL 5
221	02D13	1	V574 67051 221	HONEYCOMB

V574 67051 010

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
010	V574 67051 010	-A.2	SKIN PANEL 5	4.7945	C	2S	N/A : NOT SPARES

ICY Reference [1]	ICY Index [1]

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	WRF	-	-A.2	002	1	SKIN PANEL 5	
-	v5	SOL	-	-A.2	002	1	SKIN PANEL 5	
02B11	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	

[1] : This data is for information only until 'APPROVED STEP2' Maturity

SONACA S.A.

Drawing Set Number :	V57467056	Drawing Set Version :	- A2	Maturity :	APPROVED_STEP2	Drawing Set Description :	BOTTOM PANEL 5 ASSY	ECN
Program Work Package :	A350 LE - SLAT	Index ECN : 000	Format ECN : 3	Extracted date :	2013-10-07	Approved date :	2013-10-07	

Change reason : NEW COLOUR CHART REQUEST BY AIRBUS
AIRBUS RULES FOR ICY PART (AP2027.5)

Change description : INTRODUCED MOD 104432 (WHITE COLOR) ON BOTTOM PANEL
------ ONLY FOR SONACA SIDE -----
ON DRAWING :
ADD NOTE 066, 067 AND 068 ON SIDE ICY PART
ON BOM :
ADD FN0005 (FN068) "REFERENCED DOC. : CONTR=V57466005, V57466119"
FN0003 AND FN0004 BECOMES FLAG NOTE ON DRAWING FN066 AND FN067
FN0001 "COMPLETE THE GASKET SEALING USING THE SAME SEALANT < > CLASS < > UP TO THE GROMMETS INNER DIAMETER IN ORDER TO AVOID CAVITIES AFTER INSTALLATION ON METALLIC STRUCTURE."
REPLACED BY "COMPLETE THE GASKET SEALING UP TO THE GROMMETS ACCORDING TO FA048"

CTRM AC
MASTER COPY
ORIGINAL COPY WHEN IN RED INK STAMP

Drawing Modifications[1]

Type	Number	Proposal	Description	Start Msn[2]
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION	21

Picture sheets

Status	Number	Revision
R	1	002

V57467056000

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467056000	000	BOTTOM PANEL 5 ASSY	unchanged		V57467056000	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	200	V57467051000	BOTTOM PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		

Notes

Status	Code
R	FN 0001 [060]
R	FN 0003 [066]
R	FN 0004 [067]
C	FN 0005 [068]

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CM0591-13

V57467056001

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467056001	001	BOTTOM PANEL 5 ASSY	unchanged		V57467056001	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	201	V57467051001	BOTTOM PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		

Notes

Status	Code
R	FN 0001 [060]
R	FN 0003 [066]
R	FN 0004 [067]

REFERENCE ONLY

[1] : This data is for information only until 'APPROVED STEP2' Maturity
C : creation R : revision

[2] : This data is for information only
A : added D : decreased M : moved L : limited S : suppressed

Description of ECN see SON-DT-000-CNF-0039-EN

SONACA S.A.	Drawing Set Number : V574 67056	Drawing Set Version : -A.2	Maturity : APPROVED_STEP2	Drawing Set Description : BOTTOM PANEL 5 ASSY	PL
	Index PL : 002	Format PL : 7	Extracted date : 2013-10-07	Approved date : 2013-10-07	

Drawing Modifications[1]

Type	Number	Proposal	Description
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION

V574 67056 000

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
000	V574 67056 000	-A.2	BOTTOM PANEL 5 ASSY	5.8367	C	2S	I : CONTRACTUALLY INTERCHANGEABLE

ICY Reference [1]	ICY Index [1]
20-01.57.09	040

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01N02	v5	DRW	1	-A.2	002	1	BOTTOM PANEL 5 ASSY	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	A : SELF ADHESIVE LABEL	-	FA018

BASIC Notes : 904 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	002	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0283	-A.1	065	Y	ACTIVE	ALL	INSTALLATION AND PROTECTION OF LABELS ACCORDING TO AIPS 07-06-007
DN 0839	-A.1	064	Y	ACTIVE	ALL	INSTALLATION OF PARALLEL SHANK THREADED FASTENERS ACCORDING TO AIPS 01-02-022
DN 0853	-A.1	003	N	ACTIVE	ALL	MANUAL FASTENING OF 2- OR 4- START QUICK RELEASE FASTENERS WITH OR WITHOUT ACRES SLEEVES TO AIPS 01-03-002
DN 0856	-A.1	063	Y	ACTIVE	ALL	INSTALLATION OF METALLIC INSERTS (ACRES SLEEVES) PER AIPS 01-03-005
DN 0857	-A.1	062	Y	ACTIVE	ALL	TORQUE TIGHTENING OF ALL SCREWS, BOLTS AND NUTS IN ACCORDANCE WITH AIPS 01-02-008

PROTECTION Notes : 217 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003
DN 1593	-A.1	001	N	ACTIVE	ALL	OVERCOAT SEALING OF FASTENERS AFTER INSTALLATION ACCORDING TO CODE [illegible]

DIVERS Notes : DIVERS

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0020	-A.1	004	N	ACTIVE	ALL	APPLICABLE GENERIC TEST SHEET < V57466015 >
DN 0696	-A.1	005	N	ACTIVE	ALL	REWORK OF PAINTS ON METALLIC AND NON METALLIC STRUCTURAL PARTS ACCORDING TO AIPS 05-02-011

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.2	060	Y	ACTIVE	ALL	COMPLETE THE GASKET SEALING UP TO THE GROMMETS ACCORDING TO FA048
FN 0002	-A.1	061	Y	ACTIVE	ALL	FOR GROMMET ABS1763 INSTALLATION, UPPER OR LOWER GRIP SIZE IS ALLOWED TO BE CHOSEN DEPENDING ON THE ACTUAL PANEL THICKNESS.
FN 0003	-A.2	066	Y	ACTIVE	ALL	REFERENCED DOC. : ASSYD = V57470280
FN 0004	-A.2	067	Y	ACTIVE	ALL	REFERENCED DOC. : FROND = V57470085
FN 0005	-A.2	068	Y	ACTIVE	ALL	REFERENCED DOC. : CONTR=V57466005, V57466119.

Components

Item	Zone	Quantity	Part Number	Description
200	01H16	1	V574 67051 000	BOTTOM PANEL 5
206	01Q22	1	V574 66092 202	LIP SEAL BRACKET
208	01Q19	1	V000 66095 200	LOWER LIP SEAL
880	01J12	1	ABS0970-61	IDENTIFICATION PLATE
898	01Q10	62	ABS1763C4P04	GROMMET, QUICK RELEASE, CRES PASSIVATED
902	01K13	52	ABS1734C4V030M	STUD, AL-IVD
904	01H22	10	ABS1734C4V050M	STUD, AL-IVD
988	01R21	6	NSA5067-06-1	NUT, CLIP , STEEL CD-PLATED
1053	01R20	6	NAS1102V06-9A	SCREW, 100D HEAD, TI6AL4V, AL-RBC

V574 67056 001

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
001	V574 67056 001	-A.2	BOTTOM PANEL 5 ASSY	5.8367	C	2S	I : CONTRACTUALLY INTERCHANGEABLE

ICY Reference [1]	ICY Index [1]
20-01.57.09	041

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01N02	v5	DRW	1	-A.2	002	1	BOTTOM PANEL 5 ASSY	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	A : SELF ADHESIVE LABEL	-	FA018

BASIC Notes : 904 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	002	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0283	-A.1	065	Y	ACTIVE	ALL	INSTALLATION AND PROTECTION OF LABELS ACCORDING TO AIPS 07-06-007
DN 0839	-A.1	064	Y	ACTIVE	ALL	INSTALLATION OF PARALLEL SHANK THREADED FASTENERS ACCORDING TO AIPS 01-02-022

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0853	-A.1	003	N	ACTIVE	ALL	MANUAL FASTENING OF 2- OR 4- START QUICK RELEASE FASTENERS WITH OR WITHOUT ACRES SLEEVES TO AIPS 01-03-002
DN 0856	-A.1	063	Y	ACTIVE	ALL	INSTALLATION OF METALLIC INSERTS (ACRES SLEEVES) PER AIPS 01-03-005
DN 0857	-A.1	062	Y	ACTIVE	ALL	TORQUE TIGHTENING OF ALL SCREWS, BOLTS AND NUTS IN ACCORDANCE WITH AIPS 01-02-008

PROTECTION Notes : 217 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003
DN 1593	-A.1	001	N	ACTIVE	ALL	OVERCOAT SEALING OF FASTENERS AFTER INSTALLATION ACCORDING TO CODE < FA018 >

DIVERS Notes : DIVERS

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0020	-A.1	004	N	ACTIVE	ALL	APPLICABLE GENERIC TEST SHEET < V57466015 >
DN 0696	-A.1	005	N	ACTIVE	ALL	REWORK OF PAINTS ON METALLIC AND NON METALLIC STRUCTURAL PARTS ACCORDING TO AIPS 05-02-011

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.2	060	Y	ACTIVE	ALL	COMPLETE THE GASKET SEALING UP TO THE GROMMETS ACCORDING TO FA048
FN 0002	-A.1	061	Y	ACTIVE	ALL	FOR GROMMET ABS1763 INSTALLATION, UPPER OR LOWER GRIP SIZE IS ALLOWED TO BE CHOSEN DEPENDING ON THE ACTUAL PANEL THICKNESS.
FN 0003	-A.2	066	Y	ACTIVE	ALL	REFERENCED DOC. : ASSYD = V57470280
FN 0004	-A.2	067	Y	ACTIVE	ALL	REFERENCED DOC. : FROND = V57470085
FN 0005	-A.2	068	Y	ACTIVE	ALL	REFERENCED DOC. : CONTR=V57466005, V57466119.

Components

Item	Zone	Quantity	Part Number	Description
201	01H16	1	V574 67051 001	BOTTOM PANEL 5
206	01Q22	1	V574 66092 202	LIP SEAL BRACKET
208	01Q19	1	V000 66095 200	LOWER LIP SEAL
880	01J12	1	ABS0970-61	IDENTIFICATION PLATE
898	01Q10	62	ABS1763C4P04	GROMMET, QUICK RELEASE, CRES PASSIVATED
902	01K13	52	ABS1734C4V030M	STUD, AL-IVD
904	01H22	10	ABS1734C4V050M	STUD, AL-IVD
988	01R21	6	NSA5067-06-1	NUT, CLIP , STEEL CD-PLATED
1053	01R20	6	NAS1102V06-9A	SCREW, 100D HEAD, TI6AL4V, AL-RBC

Drawing Modifications[1]

Type	Number	Proposal	Description
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION

V574 67056 000

Part Information

Item[1]	Part Number	Version	Description[1]	Weight (kg)[1]	Weight Category	Criticity Class	ICY Class
000	V574 67056 000	-A.2	BOTTOM PANEL 5 ASSY	5.8367	C	2S	I : CONTRACTUALLY INTERCHANGEABLE

ICY Reference[1]	ICY Index[1]
20-01.57.09	040

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01N02	v5	DRW	1	-A.2	002	1	BOTTOM PANEL 5 ASSY	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	A : SELF ADHESIVE LABEL	-	FA018

BASIC Notes : 904 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	002	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0283	-A.1	065	Y	ACTIVE	ALL	INSTALLATION AND PROTECTION OF LABELS ACCORDING TO AIPS 07-06-007
DN 0839	-A.1	064	Y	ACTIVE	ALL	INSTALLATION OF PARALLEL SHANK THREADED FASTENERS ACCORDING TO AIPS 01-02-022
DN 0853	-A.1	003	N	ACTIVE	ALL	MANUAL FASTENING OF 2- OR 4- START QUICK RELEASE FASTENERS WITH OR WITHOUT ACRES SLEEVES TO AIPS 01-03-002
DN 0856	-A.1	063	Y	ACTIVE	ALL	INSTALLATION OF METALLIC INSERTS (ACRES SLEEVES) PER AIPS 01-03-005
DN 0857	-A.1	062	Y	ACTIVE	ALL	TORQUE TIGHTENING OF ALL SCREWS, BOLTS AND NUTS IN ACCORDANCE WITH AIPS 01-02-008

PROTECTION Notes : 217 A

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003
DN 1593	-A.1	001	N	ACTIVE	ALL	OVERCOAT SEALING OF FASTENERS AFTER INSTALLATION ACCORDING TO CODE < FA018 >

DIVERS Notes : DIVERS

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0020	-A.1	004	N	ACTIVE	ALL	APPLICABLE GENERIC TEST SHEET < V57466015 >
DN 0696	-A.1	005	N	ACTIVE	ALL	REWORK OF PAINTS ON METALLIC AND NON METALLIC STRUCTURAL PARTS ACCORDING TO AIPS 05-02-011

[1] : *This data is for information only until 'APPROVED STEP2' Maturity*

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.2	060	Y	ACTIVE	ALL	COMPLETE THE GASKET SEALING UP TO THE GROMMETS ACCORDING TO FA048
FN 0002	-A.1	061	Y	ACTIVE	ALL	FOR GROMMET ABS1763 INSTALLATION, UPPER OR LOWER GRIP SIZE IS ALLOWED TO BE CHOSEN DEPENDING ON THE ACTUAL PANEL THICKNESS.
FN 0003	-A.2	066	Y	ACTIVE	ALL	REFERENCED DOC. : ASSYD = V57470280
FN 0004	-A.2	067	Y	ACTIVE	ALL	REFERENCED DOC. : FROND = V57470085
FN 0005	-A.2	068	Y	ACTIVE	ALL	REFERENCED DOC. : CONTR=V57466005, V57466119.

Components

Item	Zone	Quantity	Part Number	Description
200	01H16	1	V574 67051 000	BOTTOM PANEL 5
206	01Q22	1	V574 66092 202	LIP SEAL BRACKET
208	01Q19	1	V000 66095 200	LOWER LIP SEAL
880	01J12	1	ABS0970-61	IDENTIFICATION PLATE
898	01Q10	62	ABS1763C4P04	GROMMET, QUICK RELEASE, CRES PASSIVATED
902	01K13	52	ABS1734C4V030M	STUD, AL-IVD
904	01H22	10	ABS1734C4V050M	STUD, AL-IVD
988	01R21	6	NSA5067-06-1	NUT, CLIP , STEEL CD-PLATED
1053	01R20	6	NAS1102V06-9A	SCREW, 100D HEAD, TI6AL4V, AL-RBC

V574 67056 001

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
001	V574 67056 001	-A.2	BOTTOM PANEL 5 ASSY	5.8367	C	2S	I : CONTRACTUALLY INTERCHANGEABLE

ICY Reference [1]	ICY Index [1]
20-01.57.09	041

Picture sheets

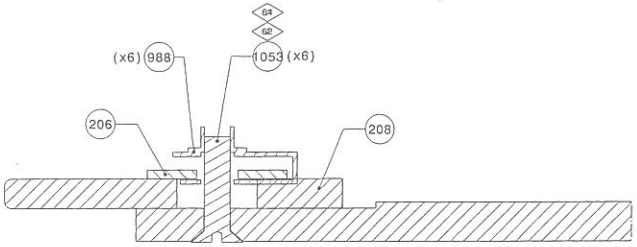
Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
01N02	v5	DRW	1	-A.2	002	1	BOTTOM PANEL 5 ASSY	

Material and Process Data

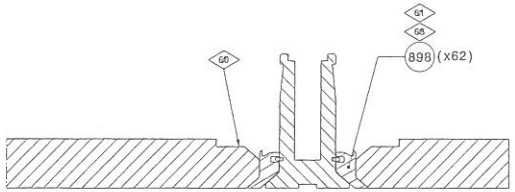
MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.2	A : SELF ADHESIVE LABEL	-	FA018

BASIC Notes : 904 A

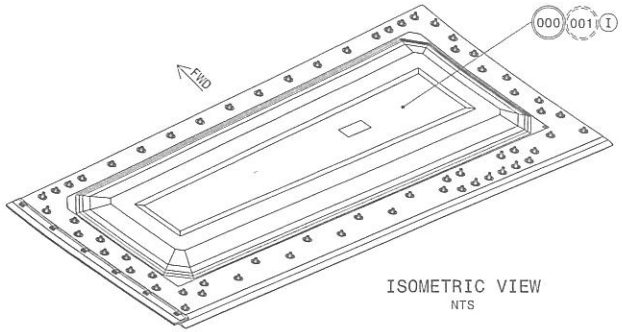
Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	002	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0283	-A.1	065	Y	ACTIVE	ALL	INSTALLATION AND PROTECTION OF LABELS ACCORDING TO AIPS 07-06-007
DN 0839	-A.1	064	Y	ACTIVE	ALL	INSTALLATION OF PARALLEL SHANK THREADED FASTENERS ACCORDING TO AIPS 01-02-022



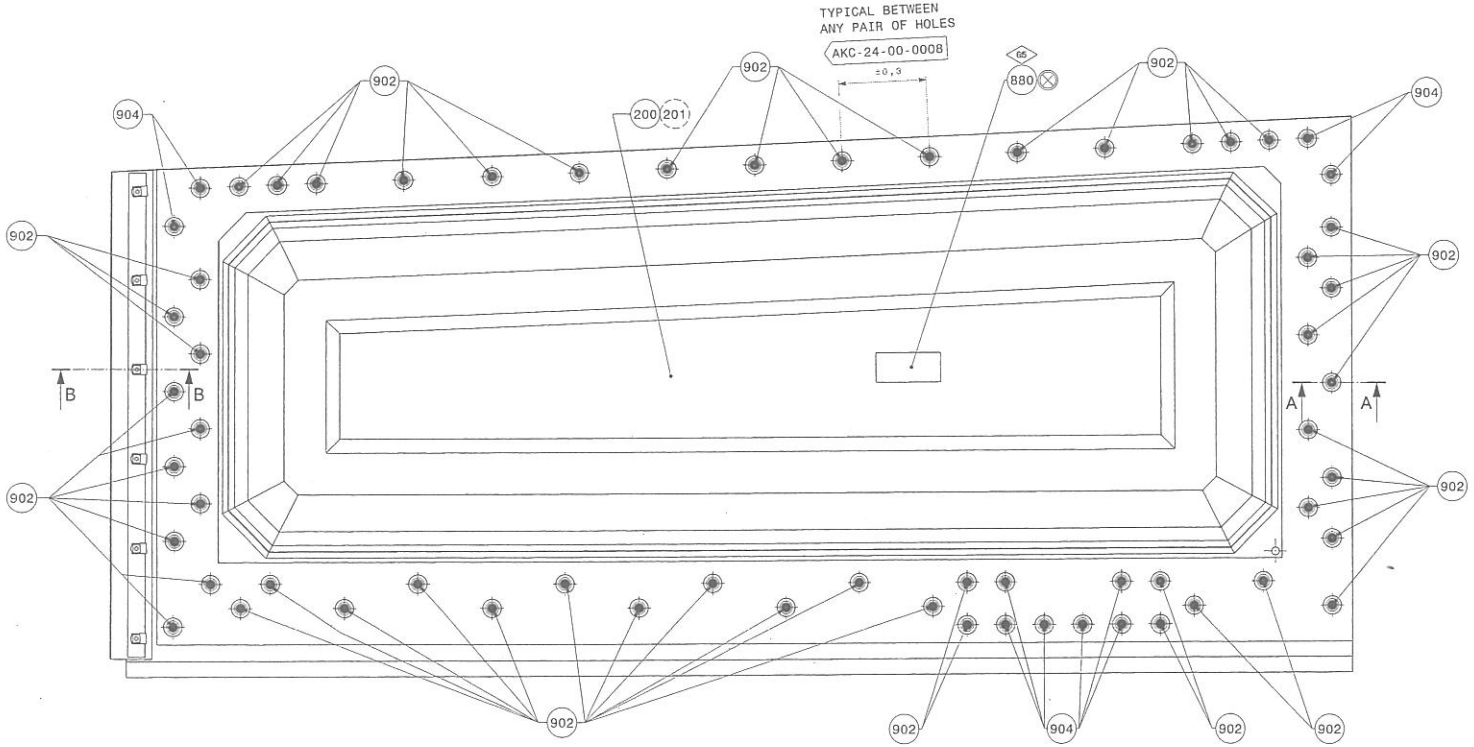
SECTION B-B
Scale: 4:1
TYPICAL VIEW FOR THE LOWER LIP SEAL (ITEM 208) AND LIP SEAL BRACKET (ITEM 206) INSTALLATION



SECTION A-A
Scale: 5:1
TYPICAL VIEW VALID FOR STUDS (ITEMS 902 AND 904)



ISOMETRIC VIEW
NTS



FRONT VIEW

CTRM AC
MASTER COPY
ORIGINAL COPY WHEN IN RED INK STAMP

REFERENCE ONLY

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08 JAN 2014
cm0591-13

ICY PART 66 67 68

PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

INCHES 0 1 2 3 4
MILLIMETRES 0 10 20 30 40 50 60 70 80 90 100

COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED A0D0001-6	SURFACE FINISH A0D0002		AIRBUS
IDENTIFICATION MARKINGS A0D0003	INTERCHANGEABLE PART DRAWING NO.	YES / NO	SCALE 1:2
ORN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O.ORIGIN BE	APPD SEE ECN	WTS SEE ECN	PROCESS SEE ECN
TITLE: BOTTOM PANEL 5 ASSY	FIRST ANGLE PROJECTION	SIZE A0	V57467056 A00
	SHEET 01		ISSUE

AS/EN/SJAC9102 Rev A First Article Inspection
Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

1. Part Number	2. Part Name	3. Serial Number	4. FAI Report
V57467056 000 00	D. NOSE PANEL 5 ASSY - LH	0024	CTRMAC-FAI/SONACA/DN-128

Characteristic Accountability				Inspection / Test Results			
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. Remarks
Drawing : V57466056							
1	Sheet 01, R21	Nut, clip, steel cd-plated Part Number: NSA5067-06-1	AIPS 01-02-008 and AIPS 01-02-022	ACCEPT	Adjustable Torque Wrench Tool Serial Number: 2JK108153	N/A	Inspection Form 103D-F
2	Sheet 01, Q22	Lip seal bracket Part Number: V574 66092 202	AIPS 01-02-008 and AIPS 01-02-022	ACCEPT	Adjustable Torque Wrench Tool Serial Number: 2JK108153	N/A	Inspection Form 103D-F
3	Sheet 01, R20	Screw, 100D Head, T16AL4V, AL-RBC Part Number: NAS1102V06-9A	Installation of parallel shank threaded fasteners per AIPS 01-02-022, Bolt torque tightening < 1.3NM -1.7NM > per AIPS 01-02-008.	ACCEPT	Adjustable Torque Wrench Tool Serial Number: 2JK108153	N/A	Inspection Form 103D-F
4	Sheet 01, Q19	Lower Lip Seal Part Number: V000 66095 200	AIPS 01-02-008 and AIPS 01-02-022	ACCEPT	Adjustable Torque Wrench Tool Serial Number: 2JK108153	N/A	Inspection Form 103D-F
5	Sheet 01, R12	Filling Sealant In Countersunk Hole (IML)	Up to the grommets inner diameter in order to avoid cavities after installation of metallic structure.	Visual	N/A	N/A	N/A
6	Sheet 01, R10	Grommet Installation	AIPS 01-03-002 and AIPS 01-03-005	ACCEPT	AFS gauge 1604GF61-05-3300 and ALCOA Fastening System	N/A	Inspection Form 103D-F

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By : IZZATE BINTI KHASBULLAH | **13. Date : 12 SEPTEMBER 2014**

Characteristic Designator: If applicable, record characteristic type (e.g., key, flight safety, critical, major, etc.).

These items s/be listed in form 2. Form 3 is reserved for inspection of design characteristics (bubbled) such as drawing dimensional characteristics with nominal and tolerances included, drawing notes, specification requirements, etc...

AS/EN/SJAC
Form 3: Cha **ty Evalu**

1. Part Number				2. Part Name			
V57467056 000 00				D. NOSE PANEL 5 ASSY - LH			
Characteristic Accountability				**Inspection / Test Result**			
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Conformance Number	
7	Sheet 01, J19	Fastener	Stud , AL-IVD ABS1734C4V030M	ACCEPT	N/A	N/A	Refer Inspection Report
8	Sheet 01, J22	Fasteners	Stud , AL-IVD ABS1734C4V050M	ACCEPT	N/A	N/A	Refer Inspection Report
9	Sheet 01, K11	Identification Plate	Installation and protection of ABS0724, NSA9117 and ABS0970 labels per AIPS 07-06-007				on as per-drawing
Drawing : V57466051							
37	Sheet 01, H14	Width paint (top coat and primer)	Painting Thickness	ACCEPT	N/A	N/A	Refer Inspection Record
38	Sheet 01, H14	Width paint (top coat and primer)	Color Difference	ACCEPT	N/A	N/A	Refer Inspection Record
39	Sheet 01, H14	Width paint (top coat and primer)	Specular Gloss	ACCEPT	N/A	N/A	Refer Inspection Record
40	Sheet 01, H14	Width paint (top coat and primer)	Adhesion	ACCEPT	N/A	N/A	Refer Inspection Record
41	Sheet 01, P23	Countersunk diameter	13.35mm (+0.1 – 0)	N/A	N/A	N/A	Refer Inspection Record
42	Sheet 01, R21	Countersunk	13.9mm ± 0.1	N/A	N/A	N/A	Refer Inspection Record
43	Sheet 01, L07	Thickness	MKC and AKC definition per AP2684 and CQS20.1.1 5.22mm ± 0.2 TYP AKC-24-00-0051	N/A	N/A	N/A	Refer Inspection Record
44	Sheet 01, M03	Countersunk	6.840 – 7.318 mm	N/A	N/A	N/A	Refer Inspection Record
The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.							
12. Prepared By : IZZATE BINTI KHASBULLAH						**13. Date : 12 SEPTEMBER 2014**	

You are referring to the wrong dwg. s/be V57467051.
Also these dwg characteristics s/be reported on detail FAI of V57467051 not on the Assy FAI !

CTRM
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SPECTROCOLOUR, GLOSSY AND ORANGE PEEL INSPECTION RECORD

EQUIPMENT	SPECTROPHOTOMETER	MULTI GLOSS 268	WAVE-SCAN II
MODEL No	CM-2600d	CTRMAC 150147	CTRMAC 030694
CALIBRATE DUE DATE	30 APR 15	02 FEB 15	11 JUN 14

PROJECT : A350 D-NOSE.
MIXING LOT NO : PUR-AVI-A350S-MAY-14-101
INSPECTION DATE : 18/05/14
INSPECTOR : GHAUS
MASTER COLOUR REFFERENCE USED : M8002

AC 46 INSP

Glossy Specification : ABP4-2127, ISO 2813 , AIPI05-02-003
Standard / Requirement Reading ; Minimum 90 GU at 60°
Spectrocolour Specification :AIPI05-02-003 AITM2-0027, ISO 7724
Standard / Requirement Reading :-
Grey M9001 = <0.50
Grey M9002 = <0.40
White M8001 = <0.70
White M8002 = <0.35
White M8003 = <0.30
Orange peel specification : AIPI05-02-003 , AITM1-0054
Standard / Requirement Reading :- Minimum 8 du

NO	PART DESCRIPTION	CSN	SPECTROCOLOUR [1]				GLOSS [2]							ORANGE PEEL [3]				*ACCEPT	*REJECT	REMARKS
			SPECTROCOLOUR READING				GLOSSY READING							ORANGE PEEL READING						
			ΔL*	Δa*	Δb*	ΔE*	1	2	3	4	5	6	MEAN VALUE	1	2	3	MEAN VALUE			
1.	5 LH - 0023	0023	-0.02	-0.04	0.27	0.28	91.1	91.6	91.1	91.3	91.0	91.4	91.2	16.3	16.8	15.6	16.9	/		
2.	5 RH	0024	-0.04	0.03	0.29	0.30	90.3	90.1	90.1	90.4	90.6	90.2	90.3	29.9	33.3	30.9	31.4	/		
3.	4 LH	0023	0.01	0.02	0.27	0.29	90.8	91.0	90.7	91.1	90.7	90.7	90.8	16.8	20.9	18.5	18.7	/		
4.	4 LH	0021	0.02	0.02	0.33	0.31	90.8	90.9	90.9	90.8	90.4	90.8	90.8	20.0	19.1	20.8	20.0	/		
5.	5 RH	0025	0.03	0.03	0.31	0.33	90.1	90.2	90.2	90.4	90.0	90.2	90.2	27.3	28.3	26.5	27.4	/		
6.	4 LH	0024	-0.04	0.01	0.12	0.12	91.3	91.5	91.0	91.3	91.7	91.8	91.4	10.9	10.1	11.1	10.7	/		
														41.3	41.		5.1.15 2408	✓		
7.	2 RH	0024	-0.01	-0.03	0.33	0.34	91.3	91.3	91.1	91.4	91.1	91.0	91.2	14.0	13.8	14.9	15.2	/		
8.	5 LH	0024	-0.05	0.00	0.29	0.30	90.9	91.1	90.9	90.9	91.1	91.1	91.0	15.2	14.7	14.7	14.9	/		
9.	3 LH	0024	-0.04	0.01	0.33	0.34	90.3	90.9	90.6	90.9	90.6	90.8	90.3	15.6	14.5	13.2	14.4	/		
10.	3 RH	0025	-0.05	0.03	0.31	0.33	90.5	90.6	90.3	90.5	90.1	90.3	90.4	15.7	16.5	18.6	16.9	/		

* PLEASE THICK ONE OF THIS COLUM

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Aero Composites

SONACA

MIXING FORM
APPLICATION OF ALL PAINT TO AN INTERNAL OR EXTERNAL SURFACE
MATERIAL: ABRASION RESISTANT PAINT CA9100 / SPECIFICATION: IPS 04-027-02

VISCOSITY ISO CUP NO. 4
VISCOSITY REQUIREMENT 33 TO 43 SECOND
POTLIFE REQUIREMENT :- 1 HOURS

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	CA9100	GOC 22751	GR284425	28 / 02 / 15	2	
HARDENER	CA8000B	SHC 19602	GR284426	31 / 01 / 15	1	
THINNER	CA8000C2	SHC 16354	GR 277538	30 / 04 / 22	1	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : A350s	18/05/14	START		START	START		2RH-0024 3RH-0025 3LH-0024 4LH-0023 5RH-0025 5RH-0024 5LH-0024 5LH-0023 4LH-0021	AC 771 PROD	AC 202 INSP
ANT-FRIC-A350S MAY 14-10/		1620	20°C 53%	N/A	1630	30°C 58%			
WEEK : 20	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : 03 POTLIFE START : 1630 POTLIFE END : 1730	40SEC	1630	20°C 53%	N/A	1700	30°C 58%	PAINT THICKNESS : 147µ		
PROJECT :		START		START	START				
ANT-FRIC-A350S- -14-1									
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT :		START		START	START				
ANT-FRIC-A350S- -14-1									
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	CA9100				2	
HARDENER	CA8000B				1	
THINNER	CA8000C2				1	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT :		START		START	START				
ANT-FRIC-A350S- -14-1									
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT :		START		START	START				
ANT-FRIC-A350S- -14-1									
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT :		START		START	START				
ANT-FRIC-A350S- -14-1									
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		

CTRM
Aero Composites

PAINT THICKNESS CHECKLIST RECORD

EQUIPMENT NAME :	COATING THICKNESS GAUGE
CALIBRATION GAUGE ID NO :	CTRM AC 150092
CALIBRATION GAUGE DUE DATE :	28-09-14
PROJECT :	A350s D-NOSE
LOT NO :	ANT-PRIL-A350S-MAY-14-101
DATE INSPECTION :	18/05/14

VERIFICATION MEASUREMENT

CALIBRATION FOIL ID NO :	CTRM AC 150186
CALIBRATION FOIL DUE DATE :	03/08/14
THICKNESS OF STANDARD FOIL (GIVEN) :	145 µm
MEASURED THICKNESS OF STANDARD :	147 µm
ACCEPTANCE THICKNESS OF STANDARD :	✓ YES ☐ NO

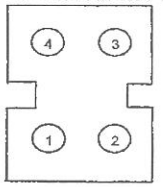
TYPE OF MATERIAL	REFERENCE		THICKNESS REQUIREMENT
APPLICATION OF ABRASION	IPS-04-027	✓	100 µm - 150 µm
RESISTANT PAINT CA9100	-02		

BEFORE PAINT :- TEST PIECES READING

MIL ☐ UM ✓

TEST PIECES NUMBER		READING	
1	BEGINNING	A1	0.5
		A2	0.4
		A3	0.7
		A4	0.6
2	MIDDLE	B1	0.3
		B3	0.2
		B4	0.4
		B3	0.1
3	END	C1	0.6
		C2	0.5
		C3	0.4
		C4	0.2

TEMPLATE TEST PIECES POINT



CHECKED BY	VERIFIED BY
AC 771 PROD 23805	AC 202 ENSP

AFTER PAINT :- TEST PIECES READING

TEST PIECES NUMBER						REMARKS
NO : 1		NO : 2		NO : 3		
BEGINNING		MIDDLE		END		
A1	125	B1	120	C1	145	
A2	126	B2	129	C2	141	
A3	128	B3	130	C3	141	
A4	126	B4	140	C4	147	

Note :-

After thickness check, the test pieces must be abrade to remove paint and recycle it for the next application.

Selected one of the highest reading from the reading taken to fill on the paper work

PROJECT: A350S

CTRM
Aero Composites

SONACA

MIXING FORM
APPLICATION OF ALL PAINT TO AN INTERNAL OR EXTERNAL SURFACE
MATERIAL: AVIOX FINISH 77702 / SPECIFICATION: AIPI 05-02-003

VISCOSITY ISO CUP NO. 4
VISCOSITY REQUIREMENT 21 TO 30 SECOND
POTLIFE REQUIREMENT :- 2 HOURS

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	77702 (M8002)	0393247229	GR320106	30/09/15	100	
HARDENER	90150	0223203075	GR300026	31/07/15	50	
THINNER	99322	0223148078	GR300473	31/05/16	50	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : D-NOSE PUR-AVI-A350SMAY-14-101 WEEK : 20 OVEN NO : 03 POTLIFE START : 1730 POTLIFE END : 1930	17/05/14	START		START	START		2RH-0024 3RH-0025 3LH-0024 4LH-0023 5RH-0025 5RH-0024 5LH-0024 5LH-0023 4LH-0024	AC 771 PROD	AC 202 INSP
		1720	20°C 54%	N/A	1730	28°C 71%			
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
	28SEC	1730	20°C 54%	N/A	1900	28°C 71%	PAINT THICKNESS : 67.2µm		
PROJECT : PUR-AVI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		
PROJECT : PUR-AVI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	77702 (M8002)				100	
HARDENER	90150				50	
THINNER	99322				50	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : PUR-AVI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		
PROJECT : PUR-AVI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		
PROJECT : PUR-AVI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		

CTRM
Aero Composites

PAINT THICKNESS CHECKLIST RECORD

EQUIPMENT NAME :	COATING THICKNESS GAUGE
CALIBRATION GAUGE ID NO :	CTRM AC 150092
CALIBRATION GAUGE DUE DATE :	28/09/14
PROJECT :	A350S - O-NOSE
LOT NO :	POR-AVI-A350S-MAY-14-01
DATE INSPECTION :	17/05/14

VERIFICATION MEASUREMENT

CALIBRATION FOIL ID NO :	CTRM AC 150182
CALIBRATION FOIL DUE DATE :	03/08/14
THICKNESS OF STANDARD FOIL (GIVEN) :	78.7 µ
MEASURED THICKNESS OF STANDARD :	78.5 µ
ACCEPTANCE THICKNESS OF STANDARD :	☑ YES ☐ NO

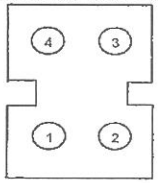
TYPE OF MATERIAL	REFERENCE		THICKNESS REQUIREMENT
APPLICATION OF AVIOX FINISH	AIM-05-02-	✓	50 µm ~ 70 µm
17702 WHITE (M8002)	003		

BEFORE PAINT :- TEST PIECES READING

MIL ☐ UM ✓

TEST PIECES NUMBER		READING	
1	BEGINNING	A1	0.7
		A2	0.5
		A3	0.5
		A4	0.6
2	MIDDLE	B1	0.4
		B3	0.3
		B4	0.5
		B3	0.7
3	END	C1	0.3
		C2	0.2
		C3	0.8
		C4	0.6

TEMPLATE TEST PIECES POINT



CHECKED BY	VERIFIED BY
AC 771 PROD	AC 46 INSP

AFTER PAINT :- TEST PIECES READING

TEST PIECES NUMBER

NO : 1		NO : 2		NO : 3	
BEGINNING		MIDDLE		END	
A1	51.3	B1	60.2	C1	64.4
A2	52.1	B2	61.4	C2	65.8
A3	52.9	B3	62.7	C3	66.7
A4	53.7	B4	63.5	C4 /	67.2

Note :-

After thickness check, the test pieces must be abrade to remove paint and recycle it for the next application.

Selected one of the highest reading from the reading taken to fill on the paper work

REMARKS

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MIXING FORM

APPLICATION OF ALL PAINT TO AN INTERNAL OR EXTERNAL SURFACE
MATERIAL: INTERMEDIATE PRIMER AVIOX CF 37124 / SPECIFICATION: AIPI 05-02-003

VISCOSITY ISO CUP NO. 4
VISCOSITY REQUIREMENT 25 TO 35 SECOND
POTLIFE REQUIREMENT :- 2 HOURS

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	37124	0225219071	GR 314017	31 /08 /14	100	
HARDENER	92245	0223218077	GR 310286	31 /08 /14	50	
THINNER						

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : A350S PRI-AVI-A350S-MAY-14-101		START		START	START		2RH-0024 3RH-0025 3LH-0024 4LH-0023 5RH-0025 5RH-0024 5LH-0024 5LH-0023 4LH-0021	AC 771 PROD	AC 202 INSP
	16/05/14	1550	25°C 70%	N/A	1600	35°C 52%			
WEEK : 20	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : N/N POTLIFE START : 1600 POTLIFE END : 1800	27SEC	1600	25°C 70%	N/A	1700	35°C 52%	PAINT THICKNESS : 11.9 µ	23805	
ROJECT : PRI-AVI-A350S- -14-1		START		START	START				
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT : PRI-AVI-A350S- -14-1		START		START	START				
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	37124				100	
HARDENER	92245				50	
THINNER						

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : PRI-AVI-A350S- -14-1		START		START	START				
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT : PRI-AVI-A350S- -14-1		START		START	START				
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		
PROJECT : PRI-AVI-A350S- -14-1		START		START	START				
WEEK :	VISCOSITY VALUE	FINISH		FINISH	FINISH				
OVEN NO : POTLIFE START : POTLIFE END :							PAINT THICKNESS :		

CTRM
Aero Composites

PAINT THICKNESS CHECKLIST RECORD

EQUIPMENT NAME :	COATING THICKNESS GAUGE
CALIBRATION GAUGE ID NO :	CTRM AC 150092
CALIBRATION GAUGE DUE DATE :	28-09-14
PROJECT :	A350s D-NOSE
LOT NO :	PRI-AVI-A350S-MAY-14-101
DATE INSPECTION :	16/05/14

VERIFICATION MEASUREMENT

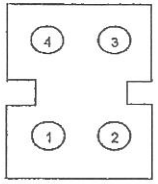
CALIBRATION FOIL ID NO :	CTRM AC 150192
CALIBRATION FOIL DUE DATE :	26/08/14
THICKNESS OF STANDARD FOIL (GIVEN) :	12.17 µm
MEASURED THICKNESS OF STANDARD :	12.16 µm
ACCEPTANCE THICKNESS OF STANDARD :	✓ YES ☐ NO

TYPE OF MATERIAL	REFERENCE		THICKNESS REQUIREMENT
APPLICATION OF PRIMER	AIPI 05-02-	✓	8 µm - 12 µm
AVIOX CF 37124	005		

BEFORE PAINT :- TEST PIECES READING

MIL		UM	✓
TEST PIECES NUMBER		READING	
1	BEGINNING	A1	0.4
		A2	0.3
		A3	0.7
		A4	0.2
2	MIDDLE	B1	0.1
		B3	0.4
		B4	0.5
		B3	0.6
3	END	C1	0.3
		C2	0.2
		C3	0.7
		C4	0.1

TEMPLATE TEST PIECES POINT



CHECKED BY	VERIFIED BY
AC 771 PROD 23805	AC 202 ENSP

AFTER PAINT :- TEST PIECES READING

TEST PIECES NUMBER						REMARKS
NO :		NO :		NO :		
BEGINNING		MIDDLE		END		
A1	8.9	B1	10.0	C1	10.8	
A2	9.1	B2	10.1	C2	11.9	
A3	9.7	B3	10.7	C3	11.7	
A4	9.0	B4	10.9	C4	11.1	

Note :-

After thickness check, the test pieces must be abrade to remove paint and recycle it for the next application.

Selected one of the highest reading from the reading taken to fill on the paper work

PROJECT: A350S

CTRM
Aero Composites

SONACA

MIXING FORM

APPLICATION OF ALL PAINT TO AN INTERNAL OR EXTERNAL SURFACE

MATERIAL: AERODUR BARRIER 37045 WHITE PRIMER / SPECIFICATION: AIPI 05-02-009

VISCOSITY ISO CUP NO. 3
VISCOSITY REQUIREMENT 33 TO 43 SECOND
INDUCTION TIME FOR 15 TO 30 MINUTES
POTLIFE REQUIREMENT :- 8 HOURS

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	37045	0223246108	GR 318916	30 / 09 / 15	100	
HARDENER	S66/22R	0223319165	GR 318917	15 / 11 / 15	50	
THINNER	C25/90S	0223324034	GR 318921	19 / 11 / 15	100	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : D-NOSE PRI-A350S-MAY-14-101 WEEK : 20 OVEN NO : 03 POTLIFE START : 1730 POTLIFE END : 0130	14/05/14	START		START	START		2RH-0024 3RH-0025 3LH-0024 4LH-0023 5RH-0025 5RH-0024 5LH-0024 5LH-0023 1sT PRIMER	AC 771 PROD 23805	AC 202 INSP
		1720	22°C 61%	1730	1800	30°C 52%			
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
	41 SEC	1730	22°C 61%	1800	1830	30°C 52%	PAINT THICKNESS : N/A		
PROJECT : D-NOSE PRI-A350S-MAY-14-102 WEEK : 20 OVEN NO : 03 POTLIFE START : 1445 POTLIFE END : 2245	15/05/14	START		START	START		4LH-0021 1ST PRIMER	AC 771 PROD	AC 202 INSP
		1437	25°C 65%	1445	1515	29°C 62%			
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
	39 SEC	1445	25°C 65%	1515	1530	29°C 62%	PAINT THICKNESS : N/A		
PROJECT : D-NOSE PRI-A350S-MAY-14-103 WEEK : 20 OVEN NO : 03 POTLIFE START : 1000 POTLIFE END : 1800	16/05/14	START		START	START		2RH-0024 3RH-0025 3LH-0024 4LH-0023 4LH-0021 5RH0025 5RH-0024 5LH-0024 5LH-0023 2nd PRIMER	AC 771 PROD 23805	AC 202 INSP
		0950	24°C 63%	1000	1030	32°C 52%			
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
	40 SEC	1000	24°C 63%	1030	1130	32°C 52%	PAINT THICKNESS : 23.4 µm		

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	37045				100	
HARDENER	S66/22R				50	
THINNER	C25/90S				100	

LOT NO	DATE	MIXING		INDUCTION TIME	APPLICATION		ROUTE CARD (CSN)	PERSON IN-CHARGE	
		TIME	TEMP / HUMI		TIME	TEMP / HUMI		PROD	QUALITY
PROJECT : PRI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		
PROJECT : PRI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		
PROJECT : PRI-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
	VISCOSITY VALUE	FINISH		FINISH	FINISH				
							PAINT THICKNESS :		

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PAINT THICKNESS CHECKLIST RECORD

EQUIPMENT NAME :	COATING THICKNESS GAUGE
CALIBRATION GAUGE ID NO :	CTRM AC 150092
CALIBRATION GAUGE DUE DATE :	28 - 09 - 14
PROJECT :	A350 D-NOSE
LOT NO :	PRI-A350S-MAY-14-103
DATE INSPECTION :	16 / 05 / 14

VERIFICATION MEASUREMENT

CALIBRATION FOIL ID NO :	CTRM AC 150195
CALIBRATION FOIL DUE DATE :	03 / 08 / 14
THICKNESS OF STANDARD FOIL (GIVEN) :	23.1 µm
MEASURED THICKNESS OF STANDARD :	23.3 µm
ACCEPTANCE THICKNESS OF STANDARD :	✓ YES ☐ NO

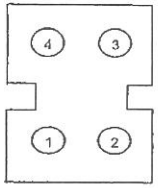
TYPE OF MATERIAL	REFERENCE		THICKNESS REQUIREMENT
APPLICATION OF AERODUR	AIPI 05-02-	✓	15 µm - 25 µm
BARRIER 37045 WHITE	009		
PRIMER			

BEFORE PAINT :- TEST PIECES READING

MIL ☐ UM ✓

TEST PIECES NUMBER		READING	
1	BEGINNING	A1	0.2
		A2	0.3
		A3	0.1
		A4	0.2
2	MIDDLE	B1	0.4
		B3	0.5
		B4	0.4
		B3	0.7
3	END	C1	0.1
		C2	0.5
		C3	0.6
		C4	0.4

TEMPLATE TEST PIECES POINT



CHECKED BY	VERIFIED BY
AC 771 PROD 23805	AC 202 INSP

AFTER PAINT :- TEST PIECES READING

TEST PIECES NUMBER						REMARKS
NO : 1		NO : 2		NO : 3		
BEGINNING		MIDDLE		END		
A1	20.7	B1	21.4	C1	23.0	
A2	21.4	B2	22.3	C2	23.4	
A3	21.3	B3	22.0	C3	22.9	
A4	21.7	B4	21.7	C4	22.7	

Note :-

After thickness check, the test pieces must be abrade to remove paint and recycle it for the next application.

Selected one of the highest reading from the reading taken to fill on the paper work

PROJECT: A350S

CTRM
Aero Composites

SONACA

MIXING FORM
APPLICATION OF ALL PIN HOLE FILLER
MATERIAL: PORE FILLER / SPECIFICATION: AIPI-05-02-009 , AIPI- 03-08-003

POTLIFE REQUIREMENT :- 21° C - 25° C (45 min)

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	PU 66	GOC 23306	GR 293126	28/02/15	4	
HARDENER	0735 / 9000	SHC 19865	GR 293127	31/03/15	1	
THINNER / REDUCER	0491 / 9000	SHC 19190	GR 280269	31/12/22	0.3	

LOT NO	DATE	MIXING TIME	MIXING TEMP / HUMI	INDUCTION TIME	APPLICATION TIME	APPLICATION TEMP / HUMI	ROUTE CARD (CSN)	PERSON IN-CHARGE PROD	PERSON IN-CHARGE QUALITY
PROJECT : D-NOSE FIL-A350S-MAY-14-101 WEEK : 20 OVEN NO : 03 POTLIFE START : 1145 POTLIFE END : 1200	15/05/14	START 1135	25°C 60%	START N/A	START 1145	26°C 71%	2RH-0024 3RH-0025 3LH-0024 4LH-0023 5RH-0025/ 5PH-0024 5LH-0024/ 5LH-0023	AC 771 PROD 24805	AC 202 ENSP
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS : N/A		
	N/A	1145	25°C 60%	N/A	1200	26°C 71%			
PROJECT : D-NOSE FIL-A350S-MAY-14-102 WEEK : 20 OVEN NO : 03 POTLIFE START : 1845 POTLIFE END : 1930	15/05/14	START 1840	25°C 66%	START N/A	START 1845	26°C 63%	4LH-0021	AC 771 PROD	AC 202 ENSP
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS : N/A		
	N/A	1845	25°C 66%	N/A	1855	26°C 63%			
PROJECT : FIL-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS :		

	MATERIAL	SUPPLIER BATCH NO.	GRR NO.	EXPIRY DATE	RATIO (BY VOLUME)	REMARKS
BASE	PU 66				4	
HARDENER	0735 / 9000				1	
THINNER / REDUCER	0491 / 9000				0.3	

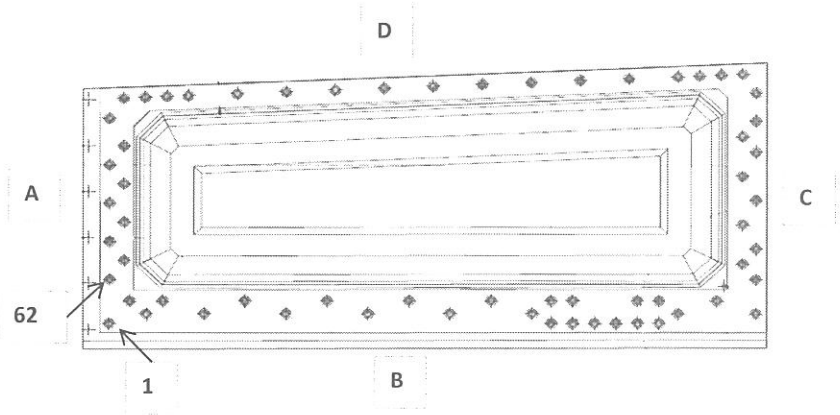
LOT NO	DATE	MIXING TIME	MIXING TEMP / HUMI	INDUCTION TIME	APPLICATION TIME	APPLICATION TEMP / HUMI	ROUTE CARD (CSN)	PERSON IN-CHARGE PROD	PERSON IN-CHARGE QUALITY
ROJECT : FIL-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS :		
PROJECT : FIL-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS :		
PROJECT : FIL-A350S- -14-1 WEEK : OVEN NO : POTLIFE START : POTLIFE END :		START		START	START				
		VISCOSITY VALUE	FINISH	FINISH	FINISH		PAINT THICKNESS :		

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350XWB SONACA				
Part name	Bottom Panel 5 (LH) / RH				
Part number	**V57467056-** 000 00	**Qty**	1		
G.R # / Work Order Router	A350 - 0205 - 0024				
Process area	**Mechanical Assy**				
Vendor / Customer name	SONACA				
Vendor / Customer part number	**V57467056 -** 000 00				
Batch / lot / Serial number	CSN 0024				
Inspected by	Hafiz	**Issue**			
Drawing number	**V57467056**	**a) Drawing sheet:**		**A00**	
		b) Revision:		**A.2**	

Diagram



No	Criteria	Standard Requirement	No	No grommet and Side	No grommet and Side	Measurement Reading (mΩ)	Accept / Reject
1	Electrical Conductivity	ΩBP5MP1 < 280 mΩ	1	1 (CB)	62 (CA)	47	A
		ΩBP5MP1 < 280 mΩ	2			47	A
		ΩBP5MP1 < 280 mΩ	3			45	A

Do measurement of electrical bonding on area: A to B or A to C or A to D. Then record down the number of hole on that area

Do measurement on OML Panel. Must measure on couple of grommet. Must measure same point for 3 times and record it.

Using Equipment measurement: Megger DLRO BT 51 (miliohmmeter)

QC Comments : Specification refer to Test Data Sheet number : TDS V574 66015 Issue: B

Overall Results : (PASS / FAIL)

16/7/14
QC stamp & date

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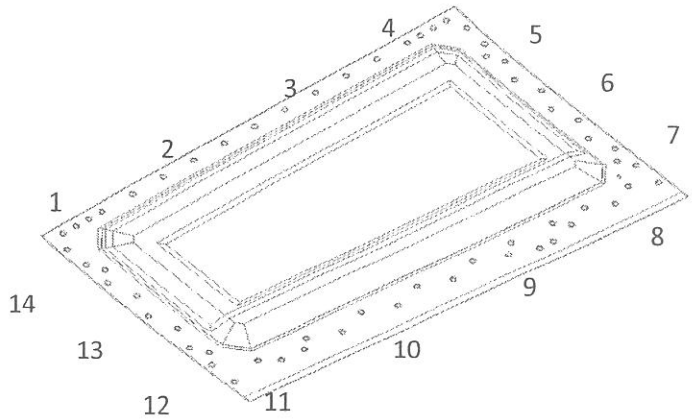
INSPECTION REPORT

Project name	A350 SONACA		
Part name	Panel 5 LH / 5 ~~RH~~		
Part number	**V57467051-** 00 000	**Qty**	1
G.R # / Work Order Router	A350S-0203- 0027		
Process area	Mech Assy		
Vendor / Customer name	SONACA		
Vendor / Customer part number	**V57467051-** 00 000		
Batch / lot / Serial number	CSN 0027		
Inspected by	Hafiz	**Issue**	
Drawing number	V57467051	**a) Drawing sheet: A00**	
		b) Revision:-A.2	

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection											Accept / Reject
				1	2	3	4	5	6	7	8	9	10		
1	EDGE SEAL	REFER DIAGRAM	0.2 - 0.7 mm	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3		A
				11	12	13	14								
				0.4	0.3	0.4	0.4								A

QC Comments : Inspection using Edge seal gauge. ID Equipment: CTRMAC 140781

Visual Inspection after cure: Layer should continues, uniform, No Blisters, No bubbles and pores

Overall Results : Pass (PASS / ~~FAIL~~)

AC 142 INSP

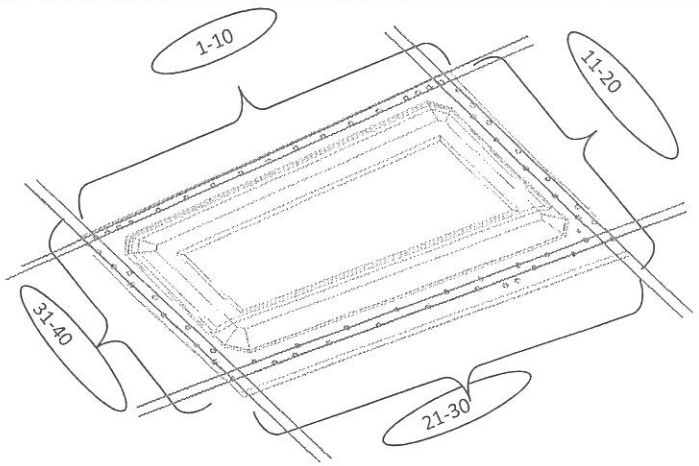
QC stamp & date
27/02/14

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 SONACA		
Part name	Panel 5 LH / 5 ~~RH~~		
Part number	**V57467056-** 00 ~~000~~	**Qty**	1
G.R # / Work Order Router	A350 -0205-0024		
Process area	Mech Assy		
Vendor / Customer name	SONACA		
Vendor / Customer part number	**V57467056-** 00 0000		
Batch / lot / Serial number	CSN 0024		
Inspected by	~~Hafiq~~	**Issue**	
Drawing number	**V57467056**	**a) Drawing sheet: A00**	
		b) Revision: -A.2	

Diagram :



outer line = a
inner line = b

No	Criteria	Area / Location	Standard / Requirement	Point of inspection											Accept / Reject
				1	2	3	4	5	6	7	8	9	10		
1	Thickness gasket	refer diagram	Gasket sealant + Panel Thickness **5.02-5.42 (5.22 ± 0.2mm)**	5.20	5.17	5.36	5.18	5.35	5.36	5.34	5.30	5.27	5.20		A
				11a	12a	13a	14a	15a	16a	17a	18a	19a	20a		
				5.22	5.21	5.26	5.16	5.23	5.28	5.21	5.07	5.10	5.11		A
				11b	12b	13b	14b	15b	16b	17b	18b	19b	20b		
				5.07	5.17	5.06	5.04	5.10	5.19	5.05	5.06	5.24	5.18		A
				21a	22a	23a	24a	25a	26a	27a	28a	29a	30a		
				5.24	5.07	5.13	5.15	5.13	5.18	5.35	5.36	5.34	5.30		A
				21b	22b	23b	24b	25b	26b	27b	28b	29b	30b		
				5.07	5.15	5.22	5.08	5.08	5.03	5.10	5.24	5.07	5.17		A
				31a	32a	33a	34a	35a	36a	37a	38a	39a	40a		
				5.23	5.20	5.32	5.31	5.26	5.16	5.17	5.06	5.04	5.21		A
				31b	32b	33b	34b	35b	36b	37b	38b	39b	40b		
				5.36	5.35	5.04	5.17	5.11	5.13	5.09	5.06	5.17	5.24		A

QC Comments : Using micrometer. ID Equipment: CTRMAC 140610

Intimate fit (No Gap) between the surface of the form-in-place and panel surface.

Visual Inspection: Surface form-in-place have a smooth and continous surface.

Overall Results : Pass (PASS / ~~FAIL~~)

AC 142 [illegible]

12/06/14

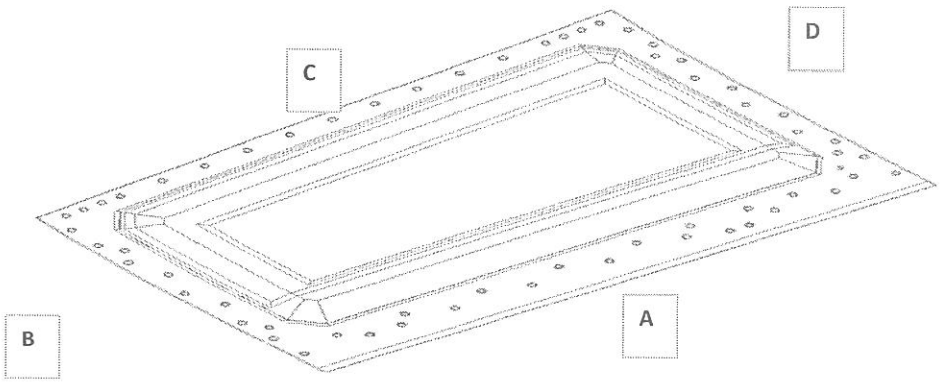
QC stamp & date

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 DROOP NOSE SONACA		
Part name	Panel 5 LH / 5 ~~RH~~		
Part number	**V57467056-** 00200	**Qty**	1
G.R # / Work Order Router	W3505-0205-0024		
Process area	Mech Assy		
Vendor / Customer name	SONACA		
Vendor / Customer part number	**V57467056-**		
Batch / lot / Serial number	CSN 0024		
Inspected by	Hafiq	**Issue**	
Drawing number	**V57467056**	**a) Drawing sheet:A00**	
		b) Revision: -A.2	

Diagram :



No	Item	Location	Requirement										Reject / Accept
				A					B				
				1	2	3	4	5	1	2	3	4	5
1	Countersunk diameter	OML Hole Diameter 10.50 mm	Spec countersunk 13.35 ~ 13.45 mm	13.38	13.42	13.41	13.39	13.36	13.38	13.43	13.40	13.42	13.39	A
				C					D				
				1	2	3	4	5	1	2	3	4	5
				13.36	13.41	13.40	13.39	13.42	13.39	13.41	13.37	13.37	13.42	A
				A					B				
				1	2	3	4	5	1	2	3	4	5
2		IML Hole Diamter 10.50 mm	Spec Countersunk 13.80 ~ 14.00 mm	13.91	13.97	13.82	13.85	13.85	13.87	13.97	13.95	13.97	13.81	A
				C					D				
				1	2	3	4	5	1	2	3	4	5
				13.84	13.95	13.86	13.87	13.92	13.95	13.82	13.91	13.97	13.81	A
				1	2	3	4	5	6					
3		OML Hole Diameter 3.6 mm	Spec countersunk 6.840 ~ 7.318 mm	6.95	7.01	7.13	6.90	7.02	7.05					A

QC Comments : Randomly check 5 hole for each side A,B,C and D

ID Equipment Inspection: CTRM-C 030829

Using countersunk gauge

Overall Results : Pass (PASS / ~~FAIL~~)

AC 142

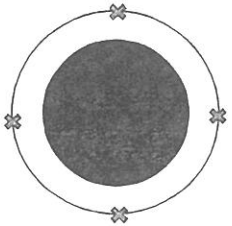
QC Stamp & Date
16/06/14

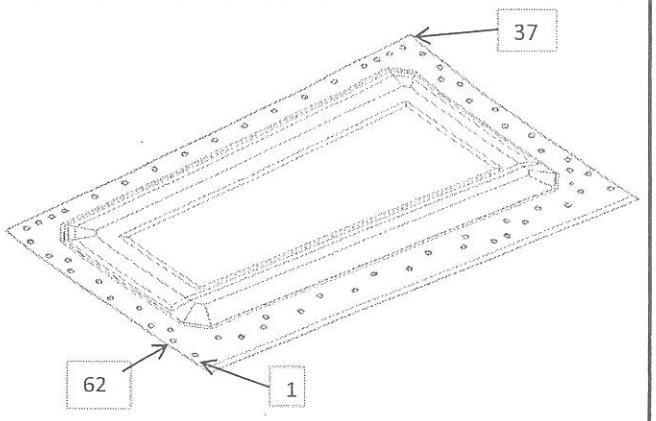
CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 DROOP NOSE SONACA		
Part name	Panel 5 LH / 5 ~~RH~~		
Part number	V57467056- 00200	Qty	1
G.R # / Work Order Router	A350S-0205-0024		
Process area	Mech Assy		
Vendor / Customer name	SONACA		
Vendor / Customer part number	V57467056- 00200		
Batch / lot / Serial number	CSN 0024		
Inspected by	Hahn	Issue	
Drawing number	V57467056	a) Drawing sheet: A00	
		b) Revision: -A.2	

Diagram :





1. Measure 4 point of grommet flushness after assembly. Record one highest value of flushness.
2. Ensure there is no rotation of grommet after installation.
3. Ensure type of Grommet as drawing requirement

No	Item	Location	Requirement	1	2	3	4	5	6	7	8	9	10	11	12	13	Reject / Accept
1	Grommet Flushness	OML Hole Countersunk	Flushness: Protrusion: Not allowed Intrusion: ~~-0.10~~ -0.20mm.	-0.09	-0.06	-0.08	-0.09	-0.06	-0.06	-0.05	-0.06	-0.07	-0.03	-0.09	-0.02	-002	A
				14	15	16	17	18	19	20	21	22	23	24	25	26	
				-0.02	-0.03	-0.04	-0.05	-0.09	-0.03	-0.03	-0.02	-0.03	-0.10	-0.09	-0.08	-0.07	A
				27	28	29	30	31	32	33	34	35	36	37	38	39	
				-0.04	-0.01	-0.01	-0.01	-0.08	-0.09	-0.08	-0.07	-0.09	-0.06	-0.06	-0.08	-0.07	A
				40	41	42	43	44	45	46	47	48	49	50	51	52	
				-0.03	-0.03	-0.04	-0.05	-0.06	-0.07	-0.09	-0.08	-0.10	-0.10	-0.06	-0.09	-0.06	A
				53	54	55	56	57	58	59	60	61	62				
				-0.05	-0.06	-0.06	-0.07	-0.08	-0.09	-0.10	-0.10	-0.01	-0.06				A

eie 18/4/14 AC 44 QA

QC Comments : _____

ID Equipment Inspection: CTRM A C 030653

Using Dial gauge

Overall Results : Pass (PASS / ~~FAIL~~)

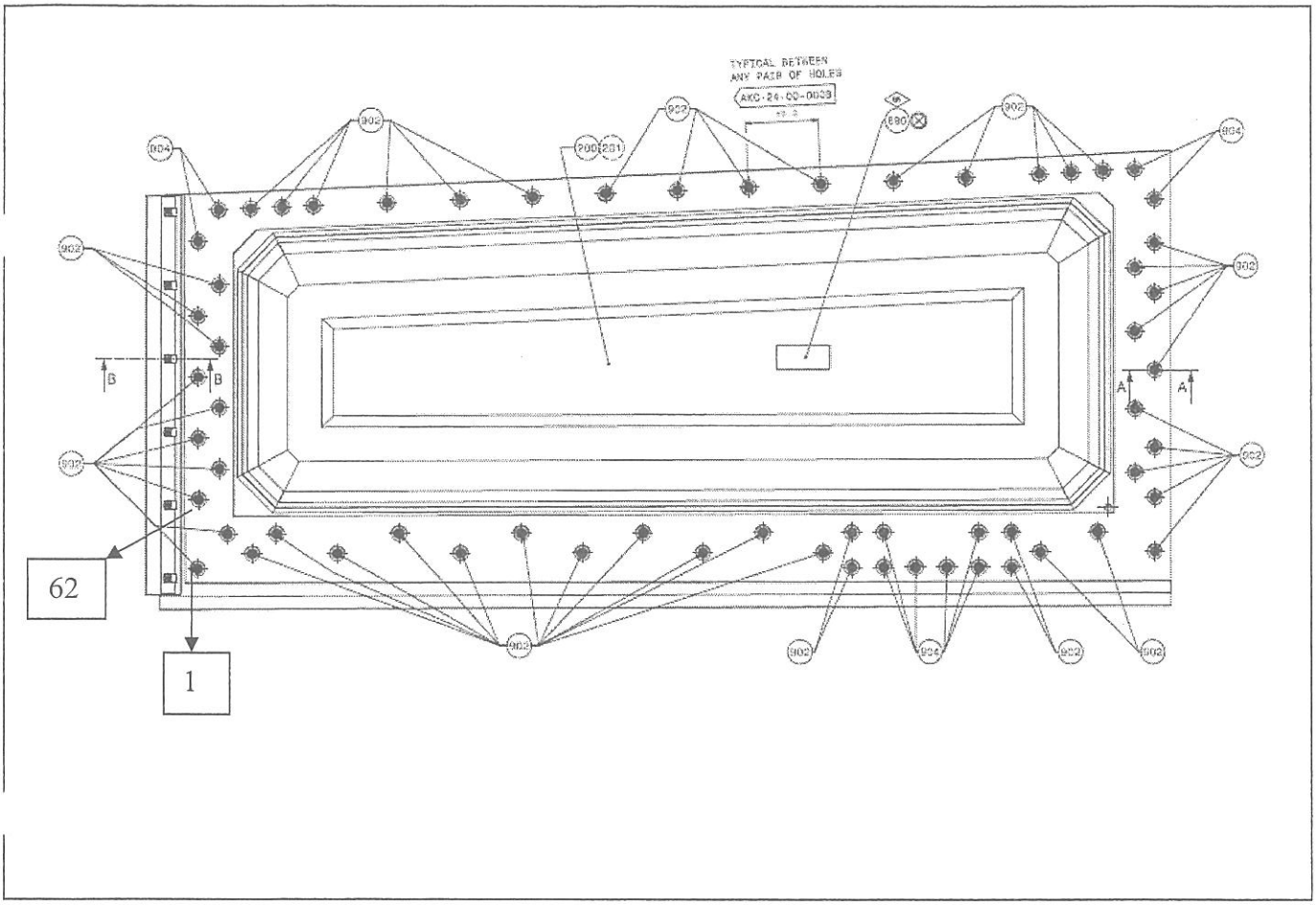
AC 142 INSP

QC stamp & date
18/06/14

MECHANICAL INSPECTION REPORT
A350 SONACA BOTTOM PANEL

CTRM
Aero-Composites

PART NAME	BOTTOM PNL 5 LH / ~~RH~~
PART NUMBER	V57467056-00200
SERIAL NO/JOB ORDER NO	A350S - 0205 - 0024
REPORT NO	



LOCATION	STUD FLUSHNESS	STUD TYPE
STUD AREA	Protrusion Spec: Max 0.05 mm Intrusion Spec: Max -0.25 mm	902: ABS1734C4V-**030M** 904: ABS1734C4V-**050M**

MECHANICAL INSPECTION REPORT
A350 SONACA BOTTOM PANEL

INSPECTION RESULT

NO	Result STUD Flushness	Accept / Reject	Stud Type	(√/ X)	NO	Result STUD Flushness	Accept / Reject	Stud Type	(√/ X)
1	-0.10	A	902	/	32	0.03	A	902	/
2	-0.23	A	902	/	33	-0.06	A	902	/
3	-0.14	A	902	/	34	-0.08	A	902	/
4	-0.14	A	902	/	35	-0.10	A	902	/
5	-0.13	A	902	/	36	-0.12	A	904	/
6	-0.07	A	902	/	37	-0.06	A	904	/
7	-0.09	A	902	/	38	-0.03	A	902	/
8	-0.04	A	902	/	39	0.00	A	902	/
9	-0.02	A	902	/	40	-0.01	A	902	/
10	0.00	A	902	/	41	-0.13	A	902	/
11	0.04	A	902	/	42	-0.14	A	902	/
12	-0.03	A	902	/	43	0.02	A	902	/
13	-0.06	A	902	/	44	-0.04	A	902	/
14	-0.10	A	902	/	45	-0.07	A	902	/
15	-0.13	A	902	/	46	-0.09	A	902	/
16	-0.04	A	904	/	47	-0.12	A	902	/
17	-0.12	A	904	/	48	-0.14	A	902	/
18	-0.01	A	904	/	49	-0.16	A	902	/
19	-0.01	A	904	/	50	-0.18	A	902	/
20	-0.04	A	904	/	51	0.04	A	902	/
21	-0.03	A	904	/	52	-0.05	A	902	/
22	-0.06	A	902	/	53	-0.06	A	904	/
23	-0.10	A	902	/	54	-0.12	A	904	/
24	-0.09	A	902	/	55	-0.14	A	902	/
25	-0.08	A	902	/	56	-0.18	A	902	/
26	-0.10	A	902	/	57	-0.20	A	902	/
27	-0.09	A	902	/	58	-0.16	A	902	/
28	-0.06	A	902	/	59	-0.14	A	902	/
29	-0.03	A	902	/	60	-0.10	A	902	/
30	-0.04	A	902	/	61	-0.11	A	902	/
31	0.02	A	902	/	62	-0.10	A	902	/

Visual inspection:

1. Ensure no damage on sleeve surface and stud surface.
2. Stud condition is dry.
3. Using Dial Gauge

RESULT: PASS / ~~FAIL~~
NCR NO: _____
GAUGE NO: EPRMAC 030653

INSPECTION STAMP:
DATE: 16/07/14

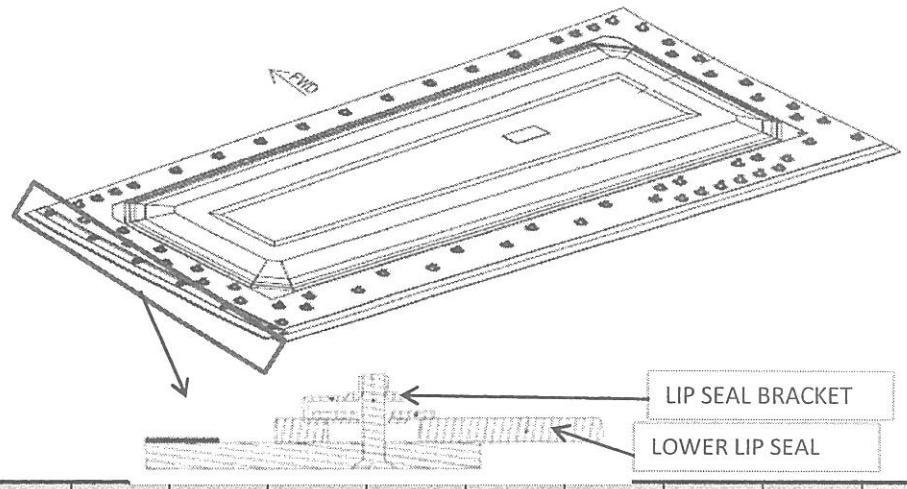
AC 142 INSP

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 DROOP NOSE		
Part name	BOTTOM PANEL 5 LH / ~~RH~~		
Part number	V57467056 00200	**Qty**	1
G.R # / Work Order Router	A350S-0205-0024		
Process area	Mech Assy		
Vendor / Customer name	SONACA		
Vendor / Customer part number	V57467056 200		
Batch / lot / Serial number	0024		
Inspected by	Hafiz	**Issue**	
Drawing number	V57467056	**a) Drawing sheet: A00**	
		b) Revision: -A.2	

Diagram :



No	Item	Location	Requirement	1	2	3	4	5	6	7	8	9	10	11	12	13	Reject / Accept
1	Countersunk	OML Hole Diameter 3.6 mm	Spec countersunk 6.840 ~ 7.318 mm	6.95	7.01	7.13	6.90	7.02	7.05								~~A~~
2	Seating of fastener heads	Refer AIPS 01-02-022	X < 0.10 mm	0.00	0.00	0.00	0.00	0.00	0.00								~~A~~
3	Seating of nut/collars		≤ 0.04 mm	0.00	0.00	0.00	0.00	0.00	0.00								~~A~~
4	Head Deformation		Refer Appendix A EWO	OK	OK	OK	OK	OK	OK								~~A~~
5	Thread Protrusion		Visual Inspection (Accept / Reject)	~~A~~	~~A~~	~~A~~	~~A~~	~~A~~	~~A~~								~~A~~

Using Feller gauge for Item 2 and 3 : ID Equipment: CTRMAC 030659

Using Vernier caliper / countersunk gauge for item 1: ID Equipment CTRMAC 030829

QC Comments : Visual Inspection for nut/collar and head for Damage. Ensure follow acceptance criteria in AIPI 01-02-022 (chapter 2.10)

After visual inspection: If Head Deformation happened: deformation need to be measure; if NO head deformation just write accept (A)

Overall Results : Pass (PASS / ~~FAIL~~)

AC 142 INSP 17/07/14

QC stamp & date

FIRST ARTICLE INSPECTION

Box W3

CTRM AERO-COMPOSITES SDN. BHD.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

7/1/14
eir 24453

Required Drawings/ Documents	Rev/Issue
V57467051 – Sheet 1/2/3/4/5/6/7	~~-A.2~~ ~~A00~~ AC 27 ME
V57467056 – Sheet 1	~~-A.2~~ ~~A00~~
A350 Bottom Panels CMR	1
TDS V57466015	B

COPY NO.
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Revision Details

Rev	Details	Date*
A	First issue. Part V5746705600000 replace V5746605600200.	24 December 2013

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D.D.C. MFG DEPT

Prepared by	Approved by (Eng)	Approved by (QA)
AC 27 ME Signature or/& stamp	AC 19 ME Signature or/& stamp	AC 44 QA Signature or/& stamp
Name: Nahdatul Izah	Name: Hazreek Aziz	Name: Aminah Kamalludin

Released by :	ZAIRUL TAMBI	Date :	09 JANUARY 2014

* Format for date must be **DD/MM/YY**

MASTER COPY
ORIGINAL COPY WHEN IN RED INK STAMP

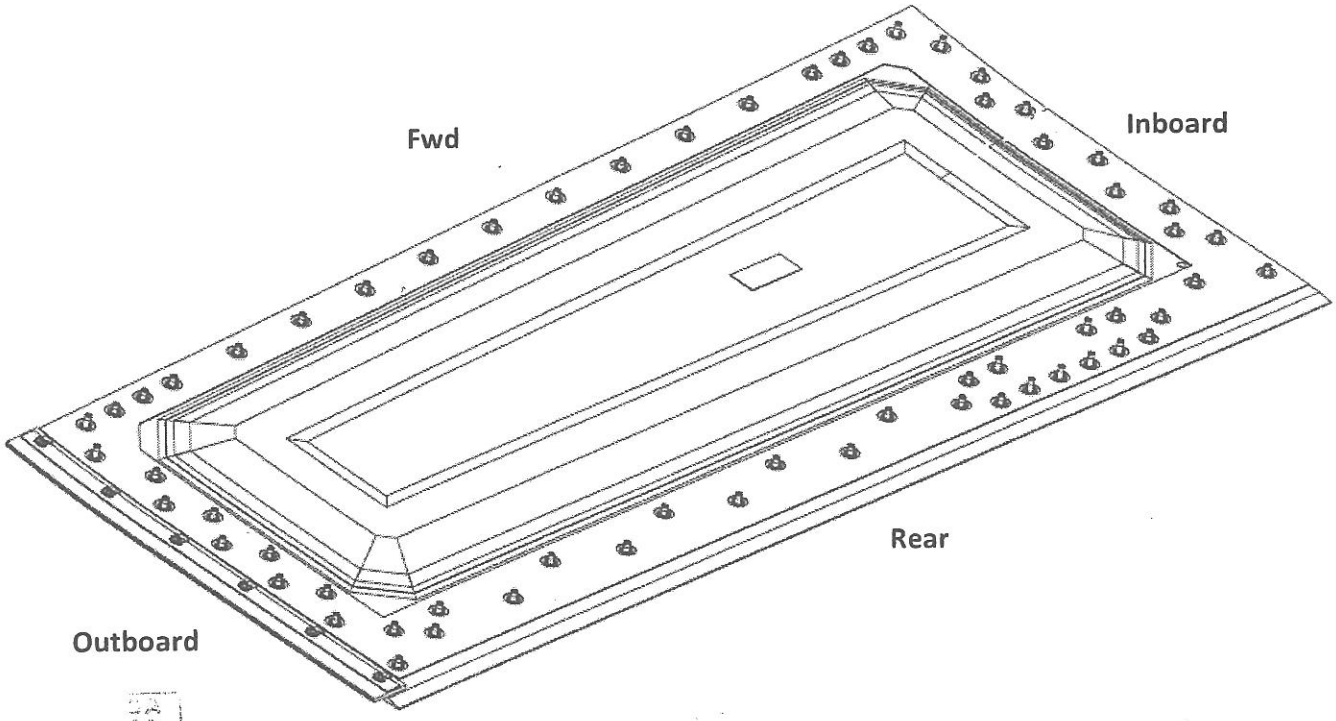
WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

Panel 5 Assy LH

Isometric (facing bagging surface)



Oper	Work Ctr	Operation Description	Tool No.
		!!! Note 1: Approved gloves and tools must be worn at all times during the manufacture of these panels. Note 2: All panels are subject to in process inspection. Note 3: This process contains interchangeable features. Note 4 : For all process required oven application the oven tolerance is ± 5 °c Note 5 : Ensure all materials use in process are within the specific storage life and pot life. !!!	
10.	DN-PNTG	<u>Received and Check Paperwork</u> **Operation** 1. Received paperwork. 2. Ensure paperwork is complete; consist of : • **Work Instruction (WI)** • **Picklist Attachment (PA)** • **Work Order Routing (WOR)** • **Work Order Picklist (WOP)** 3. Ensure all documents are correct and linked to each other. **Inspection** 1. Ensure paperwork is complete. 2. Ensure all documents are correct and linked to each other. <u>Check panel & part marking</u> **Operation** 1. Retreive correct bonded panel ; as describe below : • Part no. : **V5746705100000** • Part description: **Panel 5 LH** 2. Detail part information shall be referred to serviceable tag and part marking. 3. Record panel CSN number In Work Order Picklist. **Inspection** 1. Ensure correct panel and paperwork. 2. Ensure documents complete. 3. Ensure detail is recorded.	

20.	DN-PNTG	**Contamination removal application** 1. Clean the required surfaces prior to paint by wiping with an impregnated cloth moistened with cleaning solvent as per **AIPS 09-01-002.** 2. Remove gloss by softly sanding using alumina sandpaper or abrasive disc (grit 150 or finer) or very fine Scotch-Brite (soaked in solvent). For solid laminate parts, use abrasive disc with grit 80 or finer. 3. Directly wipe off the cleaned surface with a clean dry cloth. 4. Wash the panel surface and perform water break test as per AITM 1-0022 to detect any remaining visible contamination over the whole of prepared area. The evaluation is completed when a uniform film of water has built up on the cleaned surfaces. *(If necessary, repeat the cleaning process until a successful wet ability test is achieved.)* 5. Dry the panel for 120 minutes at 60 ± 5 °C in accordance with AIPS 09-01-002. 6. Ensure that the cleaned panel is not handled with bare hands after cleaning. **Inspection** 1. Visually inspect the test specimen to ensure the surface is free from surface imperfections.	
30.	DN-PNTG	**Painting** **Masking & Cover Up Un-Painted Area.** **Operation** 1. Cover all holes with rubber plug. 2. Masking outer Gasket Sealant Area with masking tape. Refer **Figure 1 & Figure 2** for details.	

CTRM AERO-COMPOSITES SDN. BHD.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

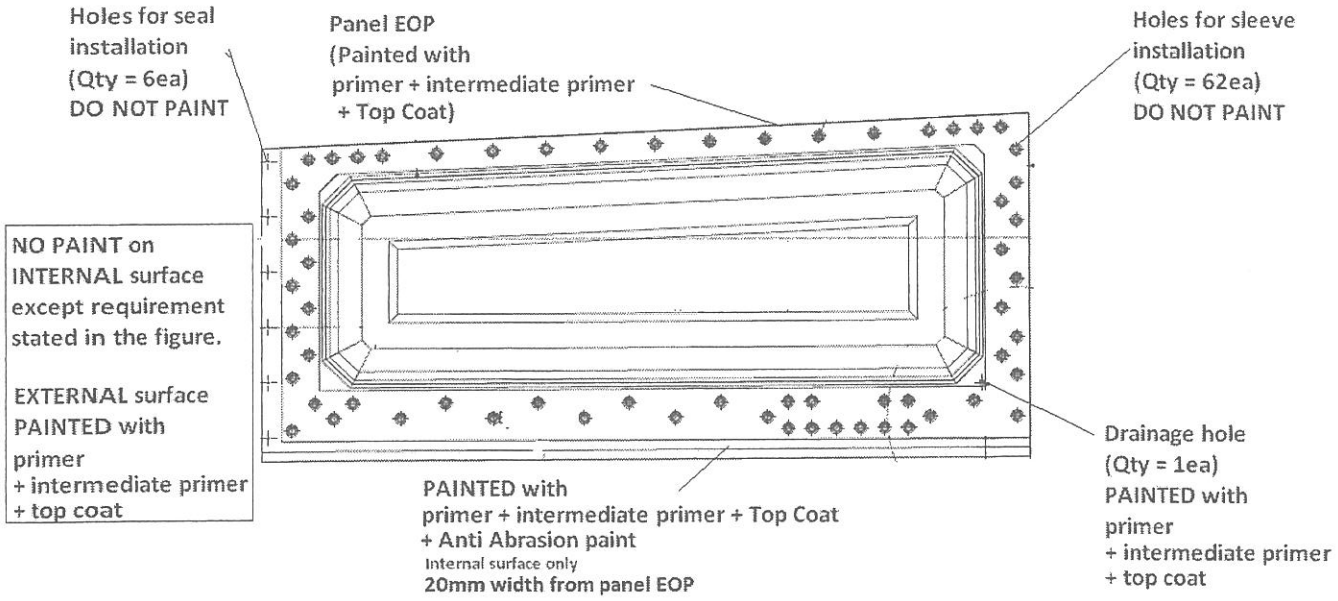


Figure 1 : Painting Application

CTRM AERO-COMPOSITES SDN. BHD.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

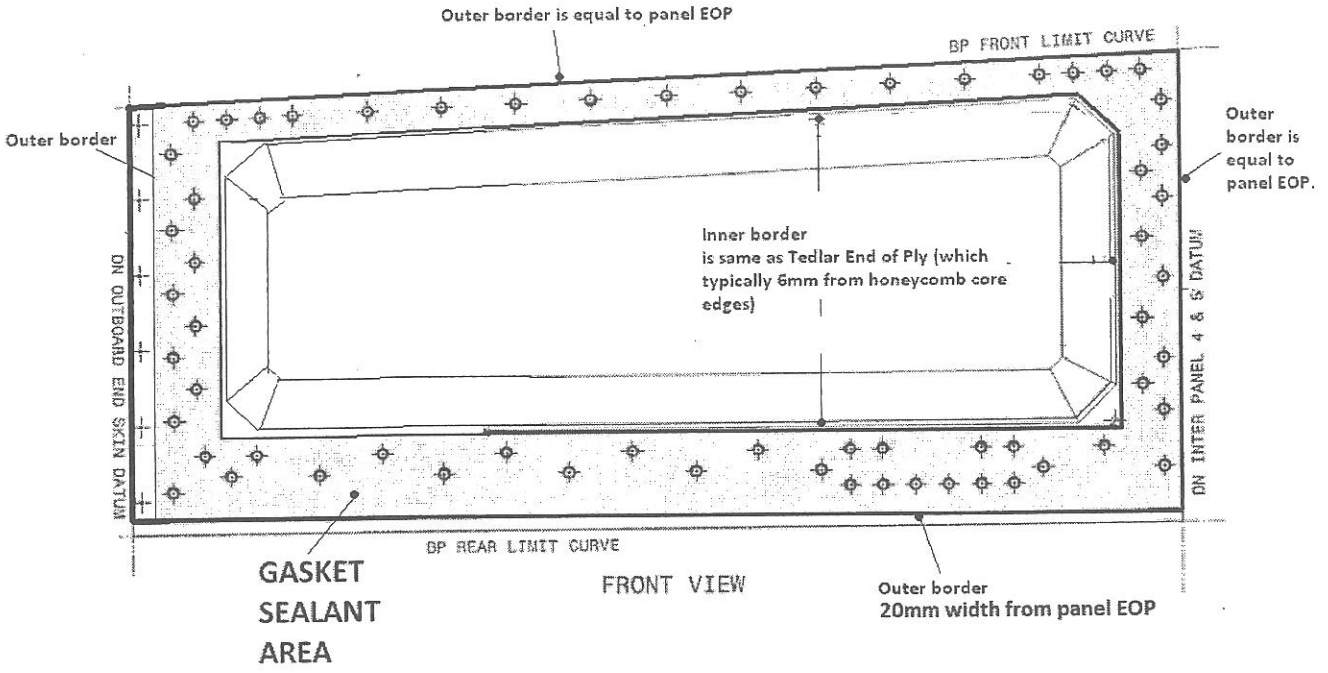


Figure 2 : Area to be covered from painting application (Gasket sealant area+ gap between anti abrasion paint area).

40.	DN-PNTG	**Primer Aerodur 37045 Preparation** **Operation (as per AIPS 05-02-009)** 1. Allow products to acclimatize to room temperature before use. 2. Stir thoroughly (10 minutes) and shake **Aerodur primer 37045** till all pigment is uniformly dispersed before adding hardener s66/22r. 3. Add hardener **s66/22r** and stir the catalyzed mixture thoroughly. 4. Add thinner **c25/90s** and stir again for 1 minute till a homogenous mixture. 5. Material mixing ratio as per below: • Base: 100 (parts per volume) • Hardener: 50 (parts per volume) • Thinner: 100 (parts per volume) 6. Record material details in Work Order Picklist 7. Record material • induction start • finish time **Note** : After mixing, wait for 15 minutes to 30 minutes before application **Note**: Operator to ensure the material to be mixed accordingly and have material pot life sticker. **Note**: The mixing shall be applied before the end of its pot life. **Inspection** 1. Ensure method as per above instruction.	
50.	DN-PNTG	**Primer Aerodur 37045 Application** **Area to be applied :** • **External (OML) surface** • **End of part (EOP)** • **Drainage hole** • **Anti Friction Paint area on IML surface** **Note : Refer to Figure 1 for details information.** **Note: Overcoating shall be carried out within 24 hours of removing part from oven.**	

1. Apply initial one thin layer of **primer Aerodur 37045** to the respective area.
2. Flash off at room temperature for 30 minutes minimum followed by 2 hours at 60 ± 5 °C.
3. Record

   - oven number,
   - curing start
   - curing finish time
   - temperature
   -

   in Work Order Routing.

4. Clean entire surface using a cleaning solvent selected from AIPS 09-01-002, IPA.

.....

5. ***Note: In any cases where pin holes are found on OML surface, prepare filler material and perform filler activity accordingly.***

   Mix material components ratio as per below:

   - *Base 546/0000: 4.0 (parts per weight)*
   - *Activator 0735/9000: 1.0 (parts per weight)*
   - *Thinner 0491/9000: 0.3 (parts per weight)*

   Pot life is 45 mins at 23±2°C.

   Record material details in Work Order Picklist.
   Apply filler on the affected area

DESCRIPTION	*PARAMETER*
POT LIFE (23±2°C)	*45 MINUTES*
INDUCTION PERIOD	*NONE*
MIXING & APPLICATION CONDITION	*15 - 35 °C & 20-85% RH*
FORCE DRYING AT 60 ± 5°C	*3 HOURS*

TECHNICAL DATA SHEET FOR FILLER PU66 IN ACCORDANCE WITH AIPI05-02-009

Cure filler at 60 ± 5°C for 3 hours.
Record curing start and finish in Work order Picklist.

.....

6. Apply subsequent one layer of primer Aerodur 37045 to the respective surface area.
7. Flash off at room temperature for 30 minutes minimum
   Followed by 2 hours at 60 ± 5 °C.

		8. Record • oven number, • curing start • curing finish time • temperature in Work Order Routing. 9. Record primer thickness in Work Order Routing. Minimum dry film thickness should be 15-25μm before overcoat paint applied on surface. **Note :** **Do not remove masking until next Epoxy Finish Application process is completed!** **Note :** **If the maximum overcoat time is exceeded, the panel shall be re-sanding with Scotch Brite. Re- apply primer and flash off at room temperature for 30 min followed by 2 hours at 60 ± 5 °C** **Inspection** 1. Ensure method as per above requirements. 2. Ensure drying specification is followed. 3. Ensure details are recorded.	
60.	**DN-PNTG**	**Intermediate Primer Aviox CF 37124 preparation** **Operation (as per AIPS 05-02-003)** 1. Allow products to acclimatize to room temperature before use. 2. Stir thoroughly (10 minutes) and shake **primer Aviox CF 37124** till all pigment is uniformly dispersed before adding hardener s66/22r. 3. Add hardener **92245** and stir the catalyzed mixture thoroughly. 4. Material mixing ratio as per below: • Base: 100 (parts per volume) • Hardener: 50 (parts per volume) 5. Record material details in Work Order Picklist **Note**: Operator to ensure the material to be mixed accordingly and have material pot life sticker. **Note**: The mixing shall be applied before the end of its pot life. **Inspection** 1. Ensure method as per above instruction.	

70.	DN-PNTG	<u>Intermediate Primer Aviox CF 37124 Application</u> **Area to be applied :** • **External (OML) surface** • **End of part (EOP)** • **Drainage hole** • **Anti Friction Paint area on IML surface** **Note : Refer to Figure 1 for details information.** **Note: Overcoating shall be carried out within 24 hours of removing part from oven.** 1. Apply initial one thin layer of intermediate **primer Aviox CF 37124** to the respective area. 2. Flash off at room temperature for 3 hours. 3. Record • curing start • curing finish time • temperature in Work Order Routing. 4. Record primer thickness in Work Order Routing. Minimum dry film thickness should be 8-12μm before overcoat paint applied on surface. **Note :** **Do not remove masking until next Epoxy Finish Application process is completed!** **Note :** **If the maximum overcoat time is exceeded (72 hours), the panel shall be re-sanding with Scotch Brite. Re- apply primer and flash off at room temperature for 3 hours.** **Inspection** 1. Ensure method as per above requirements. 2. Ensure drying specification is followed. 3. Ensure details are recorded.	

80.	DN-PNTG	**Top Coat paint preparation** **Operation (in accordance with AIPS 05-02-003)** 1. Allow products to acclimatize to room temperature before use. 2. Stir thoroughly (10 minutes) and shake **Top Coat Aviox 77702 (M8002 White colour)** till all pigment is uniformly dispersed before adding **hardener 90150**. 3. Add **hardener 90150** and stir the catalyzed mixture thoroughly. 4. Add **thinner 99322** and stir again for 1 minute till a homogenous mixture. 5. Material mixing ratio as per below: • Base: 100 (parts per volume) • Hardener: 50 (parts per volume) • Thinner: 50 (parts per volume) 6. Record material details in Work Order Picklist **Note** : • There is no induction time required after mixing. The paint is ready to be used directly after mixing. • Operator to ensure the material to be mixed accordingly and have material pot life sticker. • The mixing shall be applied before the end of its pot life. **Inspection** 1. Ensure method as per above instruction.	
90.	DN-PNTG	**Top Coat Application** **Area to be applied :** • **External (OML) surface** • **Specific area on EOP** • **Anti Friction Paint area on IML surface** **Note : Refer to Figure 1 for details information.** **Note: Overcoating shall be carried out within 24 hours of removing part from oven.** 1. Apply initial one thin layer of prepared **Top Coat Aviox 77702 (M8002 White colour)** to the respective area. 2. Flash off at room temperature for 30 minutes minimum followed by 2 hours at 60 ± 5 °C.	

		3. Record • oven number, • curing start • curing finish time • temperature in Work Order Routing. 4. Clean entire surface using a cleaning solvent selected from AIPS 09-01-002, IPA. 5. Apply subsequent one layer of **Top Coat Aviox 77702 (M8002 White colour)** to the respective area. 6. Flash off at room temperature for 30 minutes minimum Followed by 2 hours at 60 ± 5 °C. 7. Record • oven number, • curing start • curing finish time • temperature in Work Order Routing. 8. Record primer thickness in Work Order Routing. **Minimum dry film thickness should be 50-70μm** for individual layer (without primer thickness). **Note :** **Do not remove masking until next Epoxy Finish Application process is completed!** **Note :** **If the maximum overcoat time is exceeded, the panel shall be re-sanding with Scotch Brite. Re- apply primer and flash off at room temperature for 30 min followed by 2 hours at 60 ± 5 °C** **Inspection** 1. Ensure method as per above requirements. 2. Ensure drying specification is followed. 3. Ensure details are recorded.	
100.	**DN-PNTG**	**Anti Friction Paint preparation** 1. Allow products to acclimatize to room temperature before use. 2. Stir thoroughly (10 minutes) and shake **CA9100** till all pigment is uniformly dispersed before adding hardener CA8000. 3. Add hardener **CA8000B** and stir the catalyzed mixture thoroughly. 4. Add thinner **CA8000C2** and stir again for 1 minute till a homogenous mixture.	

		5. Material mixing ratio as per below: • Base: 2 (parts per volume) • Hardener: 1 (parts per volume) • Thinner: 1 (parts per volume) 6. Record material details in Work Order Picklist. **Note** : • The material is ready to be used after mixing. No induction time required. • Operator to ensure the material to be mixed accordingly and have material pot life sticker. • The mixing shall be applied before the end of its pot life. **Inspection** 1. Ensure method as per above instruction.	
110.	DN-PNTG	**Anti Friction Paint Application** **Area to be applied:** • **Specific area on IML surface (Refer to Figure 3 for detail information)** 1. Apply initial one thin layer of prepared **Anti Friction Paint CA9100** to the respective area. 2. Flash off at room temperature for 30 minutes minimum followed by 2 hours at 60 ± 5 °C. 3. Record • oven number, • curing start • curing finish time • temperature in Work Order Routing. 4. Clean entire surface using a cleaning solvent selected from AIPS 09-01-002, IPA. 5. Apply subsequent one layer of **Anti Friction Paint CA9100** to the respective area. 6. Flash off at room temperature for 30 minutes minimum Followed by 2 hours at 60 ± 5 °C. 7. Record • oven number, • curing start • curing finish time • temperature in Work Order Routing.	

8. Record primer thickness in Work Order Routing. **Minimum dry film thickness should be 100-150μm** for individual paint thickness (without primer & top coat).

Note :
Do not remove masking until next Epoxy Finish Application process is completed!

Note :
If the maximum overcoat time is exceeded, the panel shall be re-sanding with Scotch Brite. Re-apply primer and flash off at room temperature for 30 min followed by 2 hours at 60 ± 5 °C

Inspection
1. Ensure method as per above requirements.
2. Ensure drying specification is followed.
3. Ensure details are recorded.

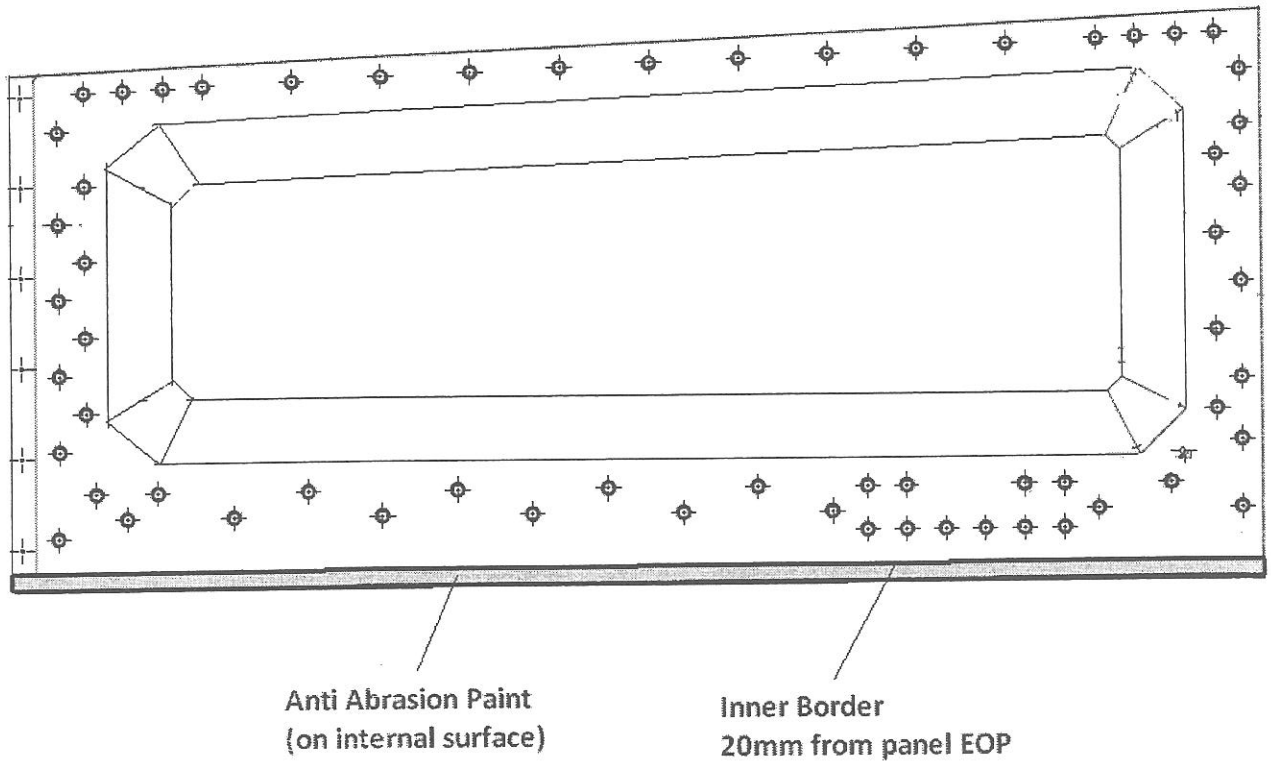


Figure 3: Anti Abrasion Paint Application Area.

120.	DN-PNTG	**Quality Inspection for Painting** **Inspection** 1. Perform "Orange Peel" testing in accordance with SOP 05-087. The acceptable result is more than 8 du. 2. Perform "Specular Gloss" inspection in accordance with SOP 05-083. The acceptable result is more than 90 GU at 60°C. 3. Perform "Specolour " inspection in accordance with SOP ~~xx-xxx.~~ 05-088 AC 27 ME eie 24453 7/11/14 The acceptable result shall not deviate more than 0.35 ($\Delta E \leq 0.35$). 4. Record inspection result in registered inspection form (Reg. no 355x-F).	
130.	DN-ASSY	**Marking of Assy Part Number (temporary)** **Operation** 1. Marks part using Staedler black ink. 2. Refer **Figure 4** below for the location and available area. 3. Marking shall contains: • 1st line - Part Number. • 2nd line - Job Order Number. **Inspection** Ensure clear marking and all info are stated. **Note:** This operation is for temporary basis. Permanent part marking will be carried out after finishing assy operation.	

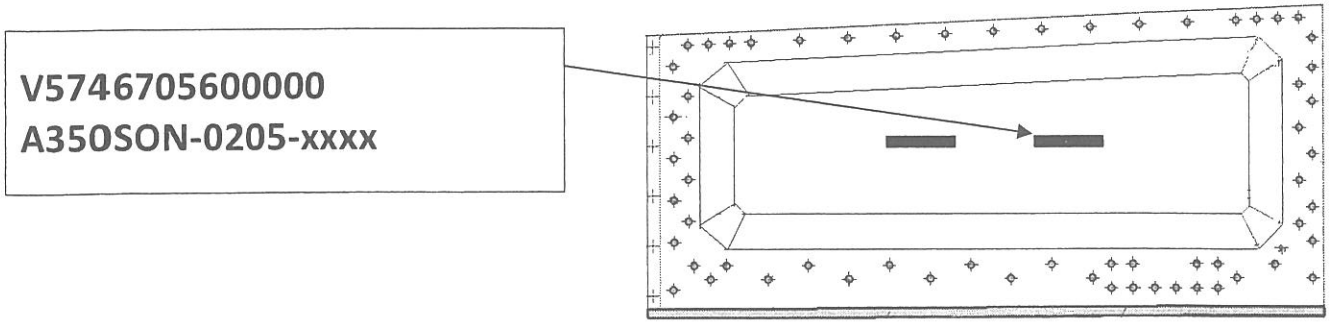


Figure 4: Assy Part marking location (on bagging surface)

140.	DN-ASSY	<u>Gasket Sealant Application</u> **Note: Temperature of sealant must not be greater than 24degC during mixing operation and if happens use refrigeration.** **Operation** **Masking un-applied area** 1. The Outer border of Gasket Sealant Area shall be covered with masking tape. Both thicker bolded lines (one is at the Tedlar / EOP and the other one is at/close to panel EOP. Refer **Figure 5** for details.	

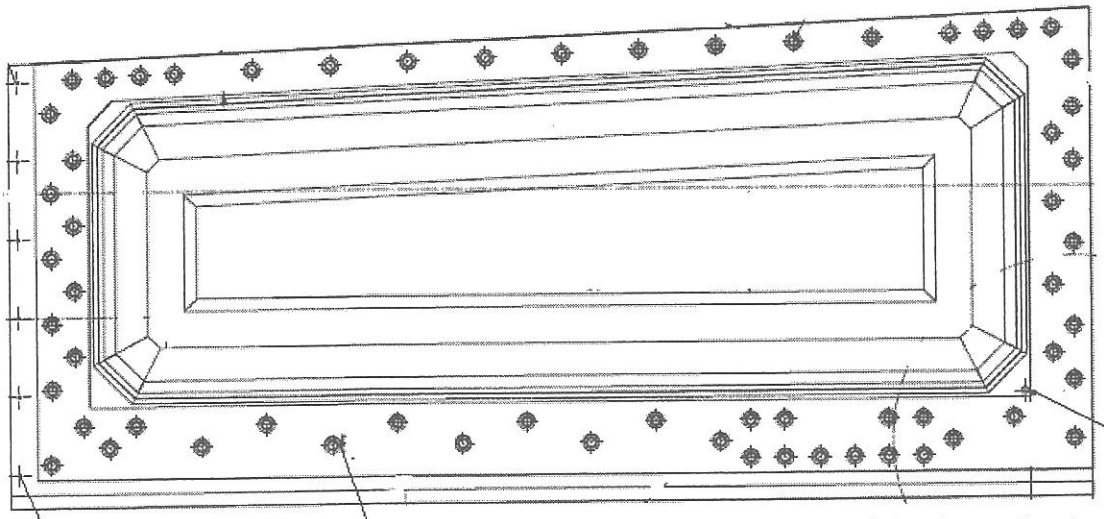


Figure 5 : Gasket Sealant Application Area.

CTRM AERO-COMPOSITES SDN. BHD.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

Note: As information, the monolithic surface which is area for gasket sealant application is already being roughened by peel ply application during lay up process. The surface roughness is good for the bonding after peel ply is being removed during demoulding process.

2. Wipe out the bonding surface is being wiped out by using IPA. This is purposely to ensure any grease, oil or other contaminants are totally being removed.

Promoter application

Note: In accordance with *AIPS 05-05-005 Form-In-Place Seals* specification, *para "4.2.3.2 Bonding surface"* stated *"the form-in-place seal shall have adhesion to the bonding surface. This shall be achieved by the application of a qualified adhesion promoter".*

3. The type of promoter selected for this package is MC115. By referring to AIPI 05-05-005 paragraph 3.2.1.2.1, the surface treated with the adhesion promoter shall be in excess of ≈4 mm of the area to be covered by the sealant. The adhesion promoter shall be applied by rubbing the surface with lintless cloths soaked in product or by brush, avoiding an excess of the product.

4. The adhesion promoter shall be dried at least for minimum 30 minutes at room temperature. If 4 hours are exceeded before applying the sealant, the adhesion promoter shall be re-applied.

5. Record material details in Work Order Picklist.

Selecting suitable washer (or spacer) to be used

6. Based from the thickness measurement result for bare panel (which is being performed at dimensional inspection stage), the suitable washer for each holes shall be selected.

7. There are three different thickness of washer have been made for this purpose.

Washer thickness	Used on area with thickness
1.0mm	4.06mm – 4.28mm
0.8mm	4.29mm – 4.51mm
0.6mm	4.52mm – 4.74mm

Note:

- Panel is being expected to be manufactured to the thicknesses 4.06mm to 4.74mm.
- Total thickness with gasket sealant is required for 5.02mm to 5.42mm.

Locate bolts and washers into the holes

8. Bolt and washers are being located onto all holes.

Sealant MC780C-4 preparation

9. Mix thoroughly MC780C-4 Base with Hardener till all pigment is uniform. Material mixing ratio as per below:

   - Base: 100 (parts per volume)
   - Hardener: 7.26 (parts per volume)

   Or

   - Base: 100 (parts per weight)
   - Hardener: 10 (parts per weight)

10. Record material details in Work Order Picklist.

Sealant Application

11. Apply sealant on both surfaces; on panel & template surface.

12. The operator shall ensure all area is covered with sealant.

13. Then the template shall be matched/ placed on top of the monolithic surface and is clamped together with sufficient pressure. The sealant shall be squeezed out as an indication that the space in between panel and template have been filled up properly.

14. The excess material shall be removed immediately before it begins to hardening.

Note : The minimum application time is 4 hours and the work life of the sealant is 6 hours. This period of time shall be respected.

Curing

15. The sealant shall be left and allowed for curing for **minimum 30 hours** at room temperature.

16. Record the date of time start & finish.

Quality inspection

1. The quality of the cured interfay sealant shall be check.

2. The void, runout and exude sealant shall be inspected. Any decrepancy shall be reworked as in accordance with AIPI05-05-001 which being invoked by requirement in the drawing; AIPS 05-05-005.

   Reworks as in accordance with AIPI05-05-001:

   For beads or small areas: systematically removed the cured sealant with a plain spatula (no metal tools must be used). Surface shall be cleaned using a cloth dampened with solvent until all traces of sealant have been removed. Then, re-apply the promoter and the sealant. Left for curing and re-inspected again.

   For large unassembled areas: All unaffected area shall be covered adjacent to the surface to be repaired. Strip the defects zone of sealant with approved strippers (the used of chemical stripper is not allowed on composite part). After all remaining sealant has been removed; perfectly clean the surface using qualified solvent and brush, cotton cloths and Scotch Brite.Re-apply the promoter and the sealant. Left for curing and re-inspected again.

3. In accordance with "AIPS05-05-005" para "4.3.3 Physical testing" stated that "the durometer hardness of the form-in-place seal shall be measured with a suitable durometer to ISO 7619. The durometer hardness of the form-in-place seal shall be in accordance with the minimum value specified in the relevant sealant material IPS" (which for MC780C-4 is more than *Shore A30*). The durometer hardness measured around the edge of the seal shall not deviate more than ±2 *Shore A* from the mean value. A minimum of six (6) determinations shall be taken from locations equally spaced around the edge of the form-in-place seal.

4. The total thickness inspection shall be carried out and recorded. Refer to **Figure 6**.

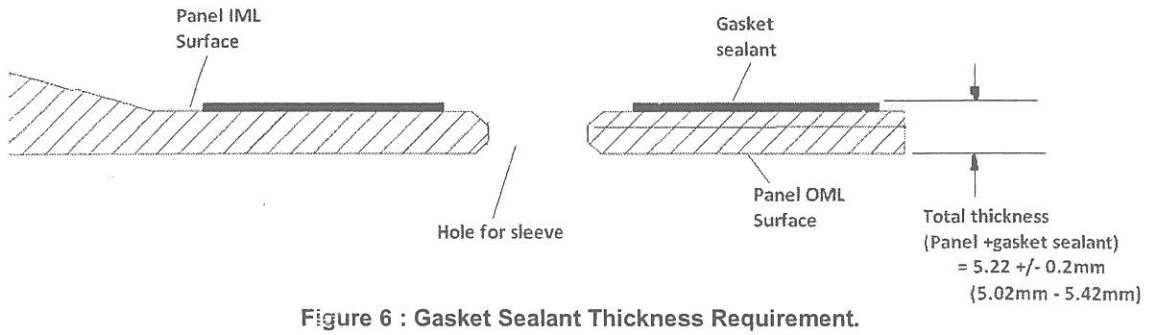


Figure 6 : Gasket Sealant Thickness Requirement.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
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150.	DN-ASSY	**Countersinking Holes (OML side only) for Sleeves Installation.** **(In accordance with AIPS 01-03-005)** **Operation** 1. Refer to **Figure 7 and Figure 8.** 2. Perform countersinking process on **OML side only at this operation.** 3. Use sleeve ABS1763C4P-xx 04 eie 24953 7/11/14 AC 27 ME as a guidance to check & achieve good condition of holes. **Inspection** 1. Ensure all holes specification is within the tolerance and recorded as required.	

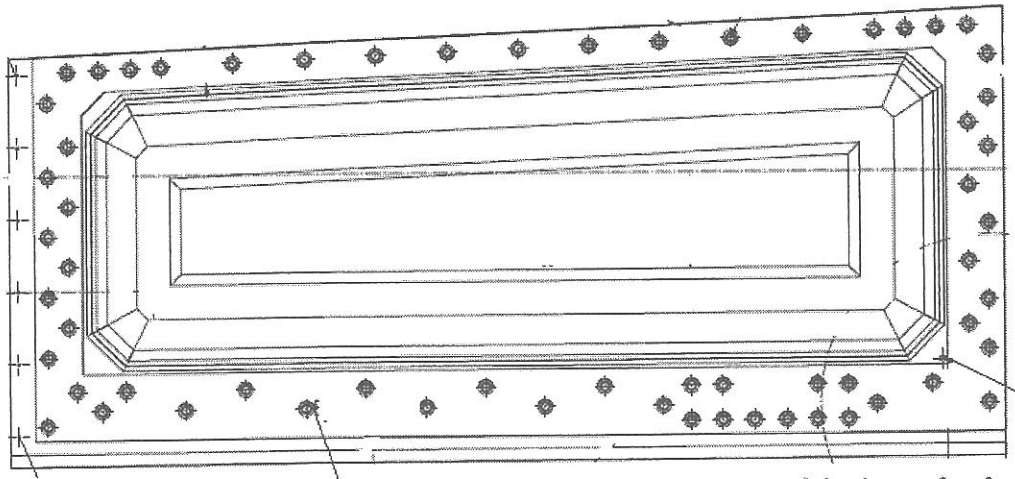

Figure 7: Holes distribution for sleeve.

* Format for date must be **DD/MM/YY**

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Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

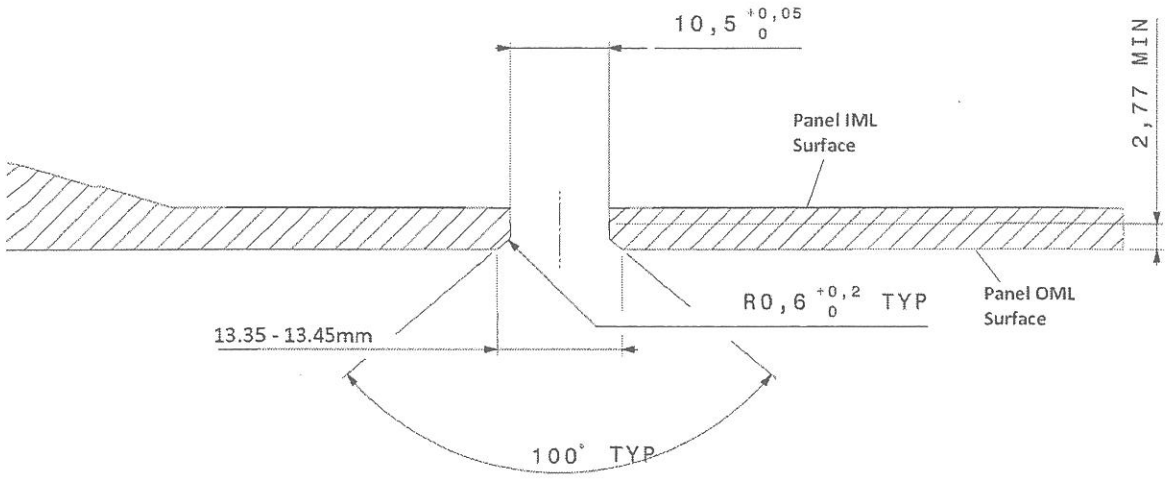

Figure 8: Holes specification for sleeve (OML side).

160.	DN-ASSY	<u>Countersinking Holes (IML side) for Sleeves Installation.</u> **Operation** 1. Refer to **Figure 9**. 2. Perform countersinking process on **IML side.** 3. Use sleeve ABS1763C4P-xx as a guidance to check & achieve good condition of holes. **Inspection** 2. Ensure all holes specification is within the tolerance and recorded as required.	

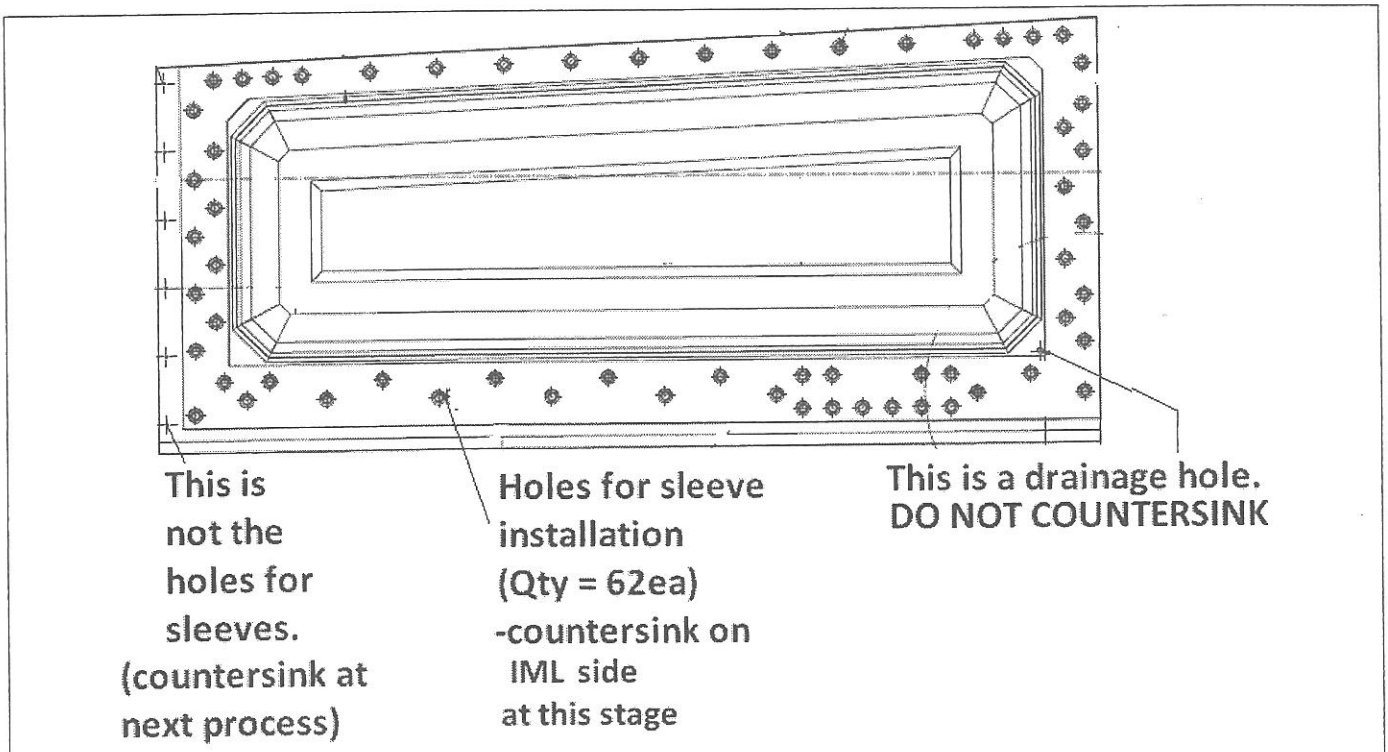

Figure 9: Holes distribution for sleeve.

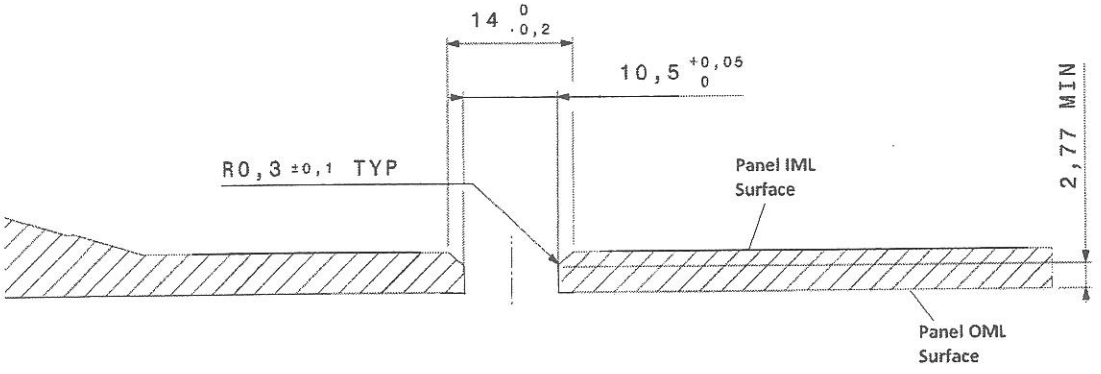

Figure 10: Holes specification for sleeve (IML side).

170.	DN-ASSY	**Countersinking Holes for Seal Installation.** **Operation** 1. Refer to **Figure 11** for holes seal installation. 2. Perform countersinking process on internal (OML) side in accordance with **Figure 12.** **Inspection** 1. Ensure all holes specification is within the tolerance and recorded as required.	

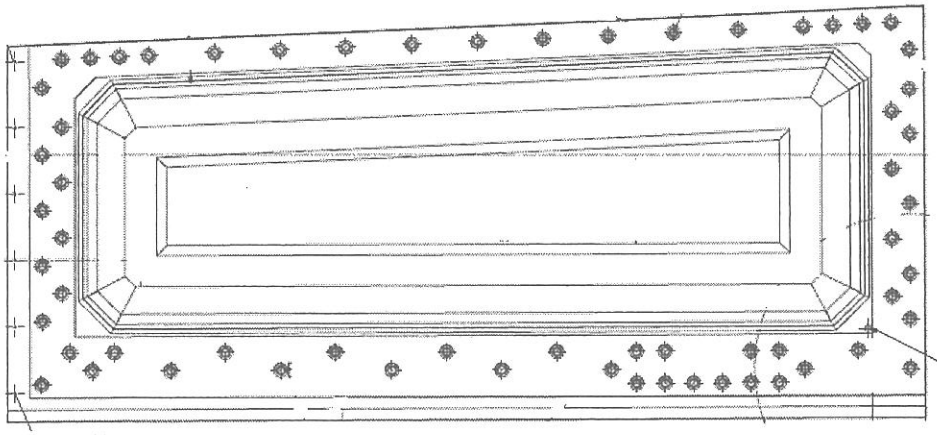

Figure 11: Holes distribution for seal installation.

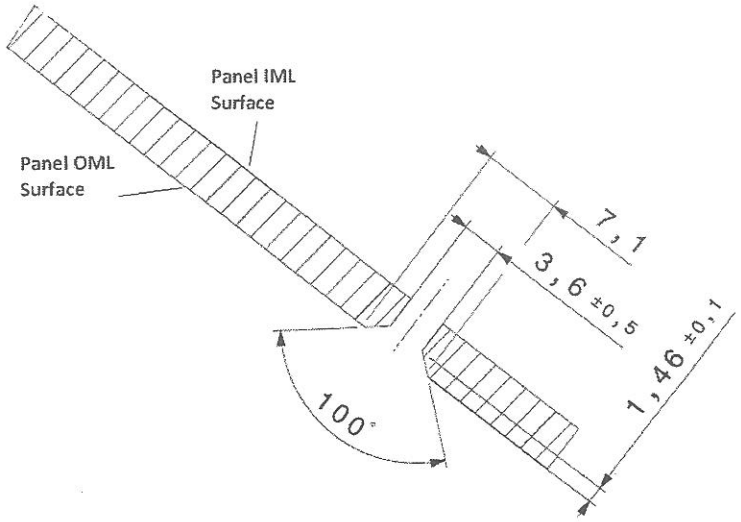

Figure 12: Holes specification for seal installation.

180.	DN-ASSY	**ABS1763 Sleeve Installation** **Determination of sleeve length to be used** **Operation** 1. Refer **to Figure 13, thickness inspection form and Table 1.** 2. By using AFS gauge 1604GF61-05-3300 (**Figure 13**), measure grip length E1 for each holes.	

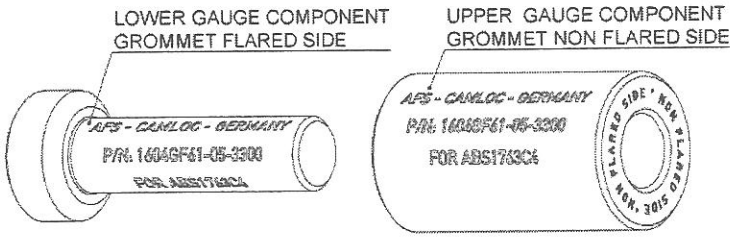

Figure 13 : AFS gauge 1604GF61-05-3300

2a. Method for holes close to the edge where vernier caliper jaw can be used for the measurement

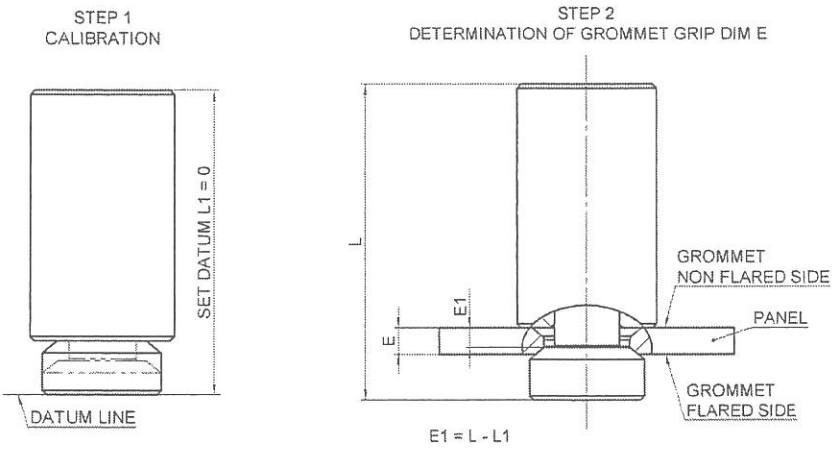

Figure 14-A : E1 measurement –Method 1

2b. Method for holes close to the edge where vernier caliper jaw cannot be used for the measurement. Use vernier caliper's end stick to get the E1 value.

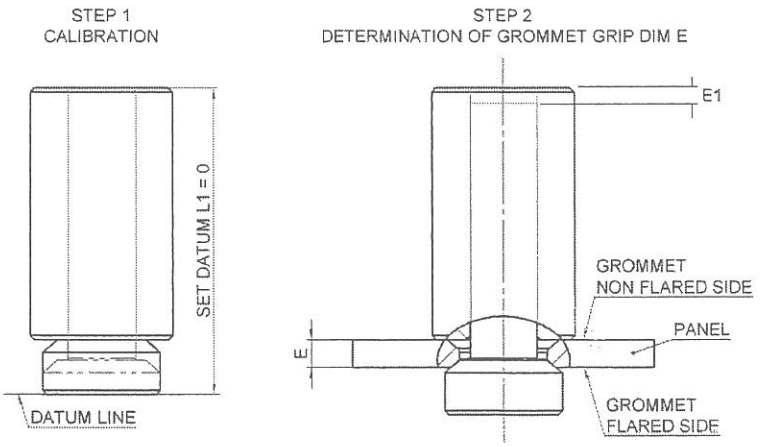

Figure 14-B : E1 measurement – Method 2

3. Determine the suitable grommet sleeve to be installed; either grommet sleeve ABS1763C4P-03, ABS1763C4P-04 or ABS1763C4P-05 by using the **Table 1** as the guidance.

E1	Grommet Sleeve to be used
2.32mm - 2.82mm	ABS1763C4P03
2.82mm - 3.32mm	ABS1763C4P04
3.32mm - 3.82mm	ABS1763C4P05

Table 1: Reference for sleeve selection

4. Record sleeve size and quantity in Work Order Routing.

Preparation of ABS1763 Grommets

1. The correct grommet shall be obtained as specified on the Drawing.
2. Ensure the surface of the grommet is free from grease and completely dry using a lint free cloth.
3. Do cleaning by clean cloth on holes to ensure no residual dust & contamination before installation of the grommet.

Preparation of Installation tools.

1. The correct grommet shall be obtained as specified on the Drawing.
2. Ensure the surface of the grommet is free from grease and completely dry using a lint free cloth.

List of installation tools.
Refer to Figure 15-A.

Installation of ABS1763 Grommets.
Refer to Figure 15-B.

Note : Pressure of installation tooling shall be regulated to 73 PSI.

1. Set the grommet on the flaring tool by sliding it over the threaded end and onto the plain shank as shown in **Step 1**.Ensure the open countersink of the grommet is facing toward the open countersink face of the flaring tool.
2. Insert threaded end of the flaring tool into the assembly as per **Step 2**. Care shall be taken to ensure no damage to the hole or structure is caused during this operation.
3. Ensure the protective foam on the nose of the installation tool is free from contaminants such as swarf and sealant.
4. Insert the nose piece over the threaded part of the flaring tool **(Step 3)** so that the protective foam touches the assembly and flare the sleeves by pressing and holding the trigger on the installation tool for 3 seconds. During the flaring operation ensure panels are held normal to the tooling axis with the pre-countersunk sleeve end firmly located.
5. In any cases of defect or bad installation quality, remove the sleeve by method below and re-install with a new grommet sleeve.

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Removal of ABS1763 Grommets

1. Insert the threaded shank of the removal tool through the front countersink of the grommet as shown in **Figure 15-C.**
2. Located the rotating element of the removed tool onto the threads of the shank and rotate in a clockwise direction.
3. Keep rotating until the grommet is removed from the assembly ensuring at all times the face of the threaded removal tool is free from contaminants that may cause damage to the assembly such as swarf.
4. The removal process shall not damage the composite.

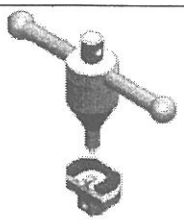
Supplier	Tooling Description	Part Number	Image
Alcoa Fastening Systems	Single Power Installation Tool	1604PT61-05	
Alcoa Fastening Systems	Powertool-set with oversize inserts and removal handtools	1604PTC61	
Alcoa Fastening Systems	Removal Tool To be used with installed stud nut!	1604RT61-1AY	
Alcoa Fastening Systems	Removal Tool Only to be used without stud nut!	3300-1052	

Figure 15-A : List of installation tool for ABS1763 Grommet sleeve.

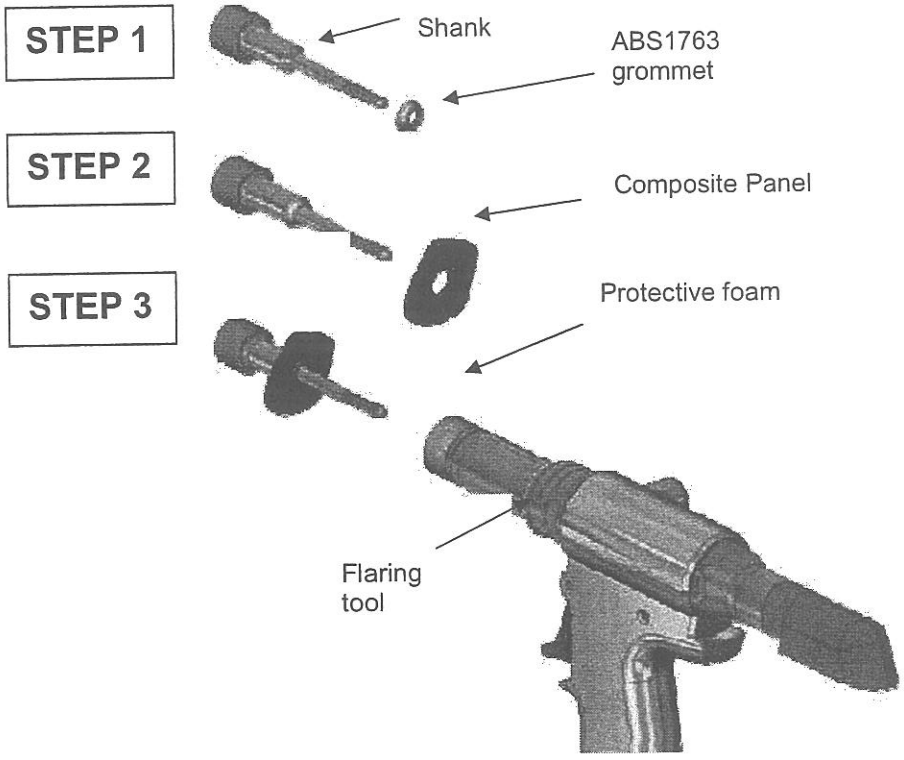


Figure 15-B: General Steps for ABS1763 Grommet Installation

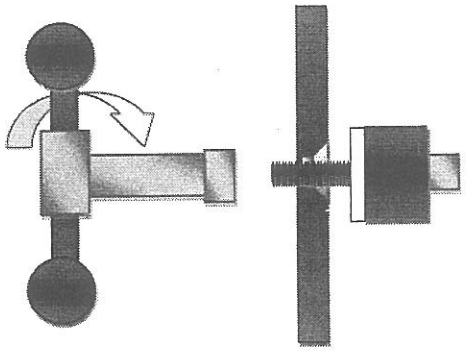


Figure 15-C: Grommet Removal Procedure.

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WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON-0205- 01	A

Part No.	Description	Part Issue
V5746705600000	A350XWB: D. NOSE PANEL 5 ASSY- LH	-A.2

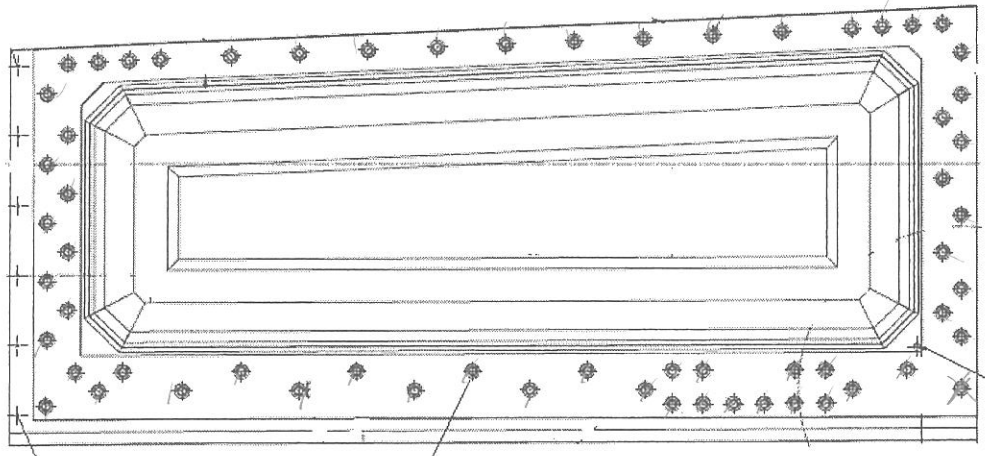


Figure 16: Affected holes for sleeve installation

Inspection

1. Refer to **Figure 15 & 16.**
2. Ensure method as per above instruction.
3. Ensure no rotatable grommet condition by performing trial check using finger.
4. Check grommet sleeves are correctly set, free from cracks and panels are not damaged or distorted. The machining of sleeves to achieve correct protrusion/intrusion limits is prohibited.
5. Checks shall be made to ensure that :-
   - Sleeves are correctly seated and flared to meet the positional requirements. **(maximum intrusion = 0.20mm; protrusion = not allowed)**
   - Flared sleeve edges are free from visible cracking and damage.
   - The flared portion of the sleeve does not protrude beyond the back face of the panel.

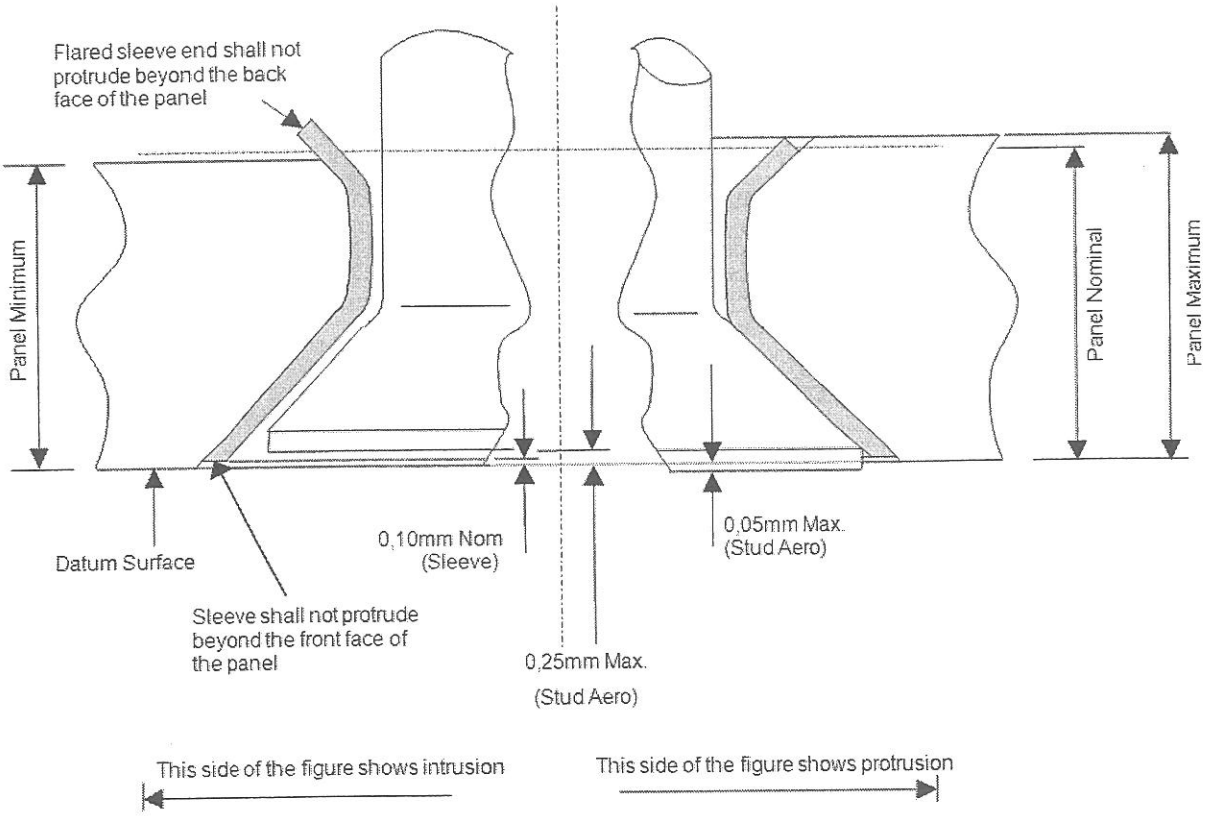


Figure 17: Sleeve and stud condition

190.		**Gap Filling** **Operation** **Sealant MC780C-4 preparation** 1. Mix and stir thoroughly MC780C-4 Base with Hardener till all pigment is uniform. 2. Material mixing ratio as per below: • Base: 100 (parts per volume) • Hardener: 7.26 (parts per volume) Or • Base: 100 (parts per weight) • Hardener: 10 (parts per weight) 3. Record material details in Work Order Picklist. **Sealant Application** 1. Refer to **Figure 18**.Fill up the gap with sealant MC780C by thin tip brush or stick. 2. Smothering the sealant until the wet sealant is flush with the cured sealant surface. 3. The operator shall ensure all area is covered with sealant. The excess material shall be removed immediately before it begins to hardening. **Note : The minimum application time is 4 hours and the work life of the sealant is 6 hours. This period of time shall be respected.** **Curing** 1. The sealant shall be left and allowed for curing for **minimum 30 hours** at room temperature. 2. Record the • **date & time start** • **date & time finish** in the Work Order Routing. **Quality inspection** 1. Ensure all area is totally filled up with sealant. 2. Ensure proper condition of flushness is achieved.	

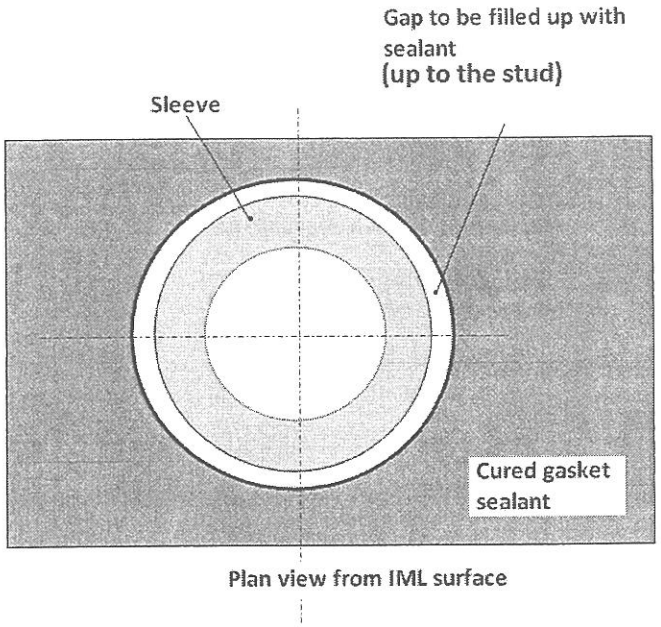
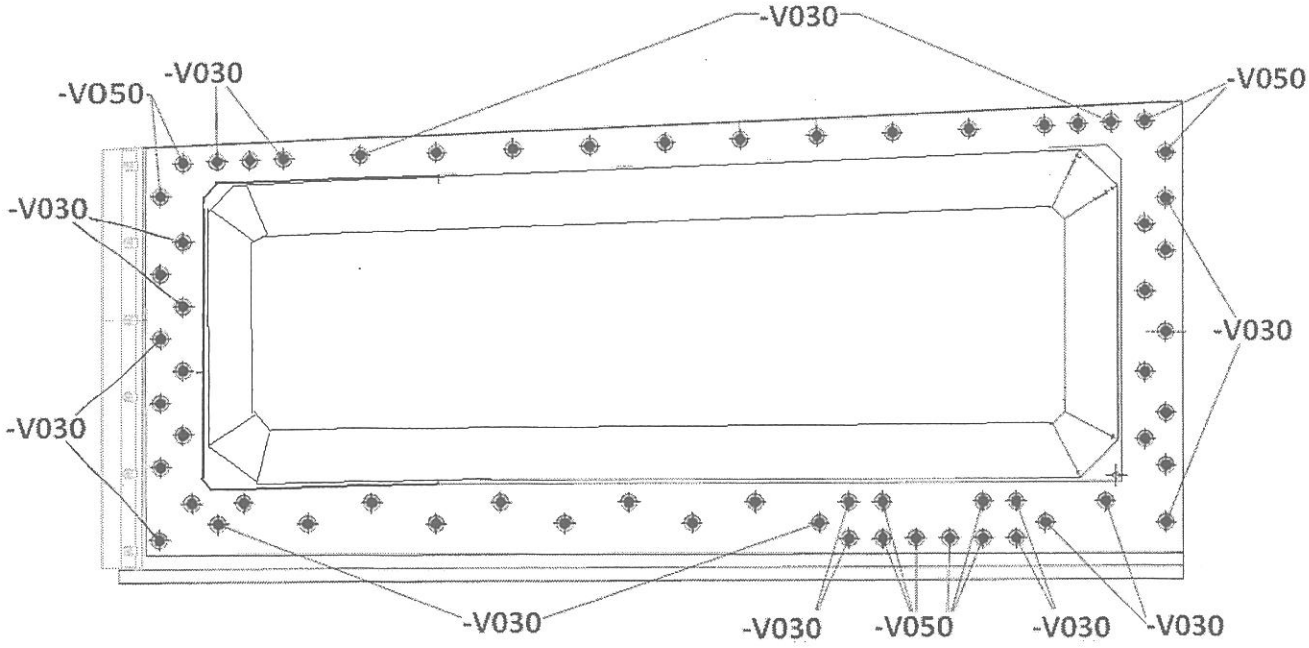


Figure 18: Gap information

200.	DN-ASSY	**<u>Stud Installation</u> (In accordance with AIPS 01-03-002)** **Operation** 1. Refer to **Figure 19** for ABS1734C4V030M / ABS1734C4V050M Stud quantity and location. 2. Install all Studs with correct length into the required holes. 3. Record Stud's • batch number • GR number in Work Order Picklist. **Inspection** 1. Ensure all holes require Stud installation is compiete. 2. Ensure Stud flushness by using dial gauge **(Maximum Protrusion tolerance = 0.05mm/ intrusion tolerance = 0.25mm).** 3. Ensure all Studs condition are hold in secure.	



Distribution of Stud ABS1734C4V0_0M installation

Figure 19 : Distribution of Stud ABS1734C4V -xxx- M on panel

210.	DN-ASSY	**Seal and Bracket Installation** **Operation** 1. Refer to **Figure 20.** 2. Degrease and clean up seal holes by using IPA. 3. Install Lower Lip Seal V57466095200 and Lip Seal Bracket V57466092202 onto the panel. Use NAS1102V06-9A Screw and NSA5067-06-01 to assemble both items. 4. **Tool to be used: Torque wrench** 5. Apply 1.3Nm -1.7Nm torque load during fastening the fasteners. 6. Record material details in Work Order Picklist. **Inspection** 1. Ensure installation is in good condition. 2. Ensure torque load applied to 1.3Nm – 1.7Nm. 3. Control bolt head flushness to; intrusion 0.18mm and protrusion 0.05mm.	TOOL TYPE : ADJUSTABLE TORQUE WRENCH TOOL MANUFACTURER : TORQUE LEADER TOOL SERIAL NUMBER : 2JK108153

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Contract/Project CAC/SON/002	Work Instruction A350SON-0205- 01	Revision A
Part No. V5746705600000	Description A350XWB: D. NOSE PANEL 5 ASSY- LH	Part Issue -A.2

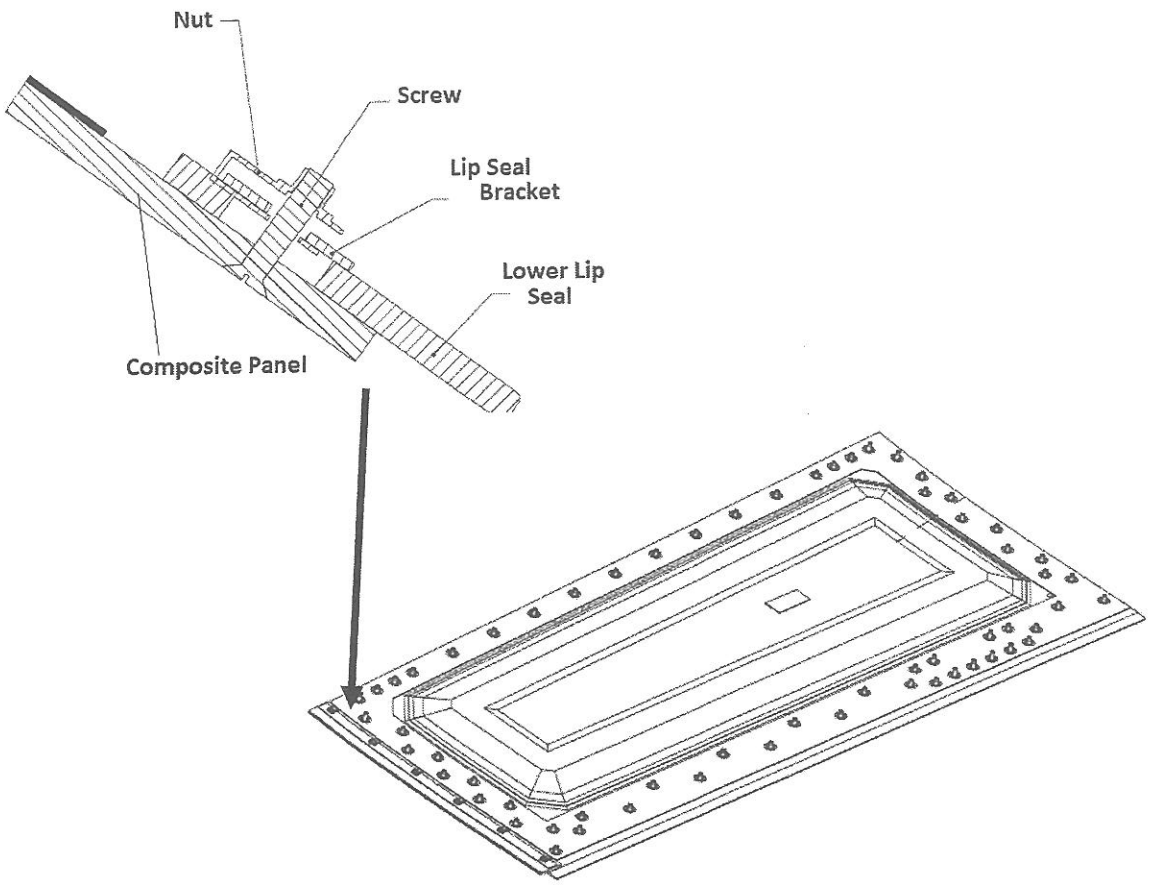
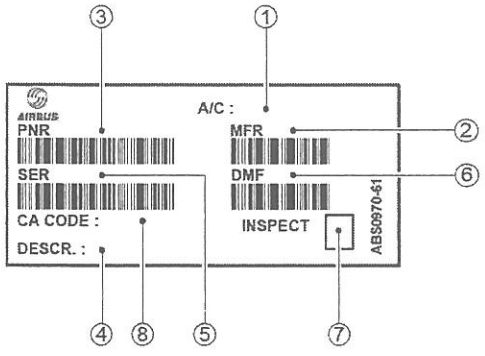


Figure 20 : Seal installation

220.	DN-ASSY	**Manual Part Marking & Barcode Labelling** 1. Remove temporary ink part marking by using IPA. 2. Perform part identification works in accordance with instruction below: **Moulded Part Number identified by Manual ink part marking (AIPS07-06-007)** **Operation** 1. Copy and re-write part marking part using Aerospace marker (black ink). 2. Refer **Figure 22** below for the location and available area. 3. Marking shall contains: • 1st line – Moulded Part Number. • 2nd line – Moulded Job Order Number. **Assy Part Number identified by Barcode Label (ABS0970-61)** **Operation** **Surface preparation.** 1. Cleaned area for bar code placement using a cleaning agent IPA (2 -Propanol) in accordance with AIPS09-01-002. The surface shall be cleaned, perfectly degreased and dried. 2. Ensure surface is clean and dry. **ABS0970-61 Barcode preparation & Installation** 3. Print bar code label with the following information in accordance with ABS0970-61 specification. (Refer **Figure 21** for an example)  **ABS0970-61** **Figure 21 : Barcode label specification**	

****

Detail description:

1. *A/C:* ***A350XWB***
3. *Mfr: (manufacturer code)****FAPE3***
4. *PNR: (part no as per drawing no):* ***V5746705600000***
5. *DESCR: (part name, including LH / RH):* ***BOTTOM PANEL 5 ASSY [LH]***
6. *SER: (panel assy serial no)* ***xxxx***
7. *DMF: (manufacture completion date)* ***day/ Month/ Year***
8. *INSPECT:* ***(QC stamp)***
9. *Ca Code:* ***(leave blank)***

****

4. Stick self-adhesive bar code label, onto panel.
5. Apply pressure over the entire surface of the label using for example a rubber roller or squeegee. Care should be taken to ensure that the edges are bonded and all air bubbles are eliminated.

NOTE: If, despite the precautions taken, air bubbles persist between the film and the surface, perforate the bubbles with a pin or needle. To be sure that the surface protection under the label will not be damaged, use a plastic pin or a plastic needle. This must be carried out immediately after the application.

Inspection

1. Ensure clear marking and all infos are stated correctly.
2. Ensure format as per requirements.
3. Ensure no air bubbles under the bar code label.

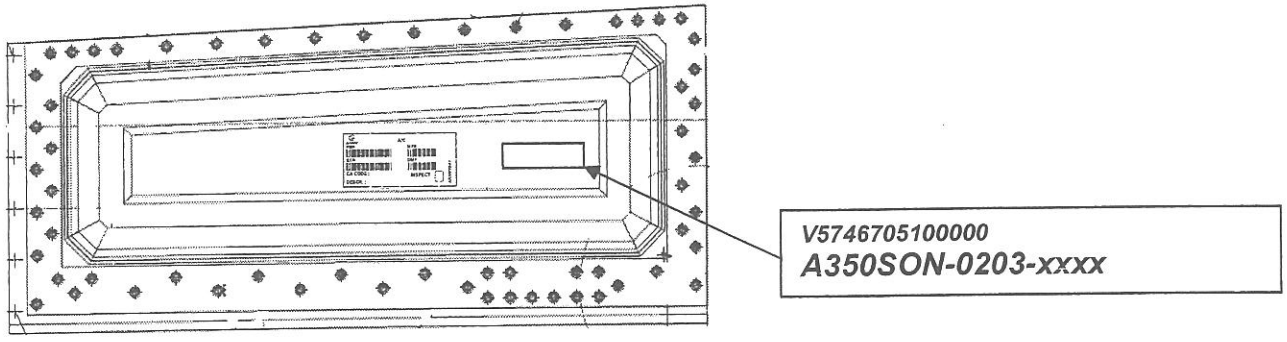


Figure 22: Final Moulded and Assy Part Number Identification

* Format for date must be DD/MM/YY

230.	DN-ASSY	**Lacquer application** **Laquer Aerodur Clearcoat UVR preparation** 1. Mix laquer coating base Aerodur Clearcoat UVR with activator . • **Base Aerodur Clearcoat UVR: 100 (ratio by volume)** • **Hardener S66/22R: 100 (ratio by volume)** 2. Allow products to acclimatize to room temperature before use. 3. Stir or shake Aerodur® Clearcoat UVR thoroughly before adding hardener. 4. Add Hardener S 66/22 R and stir the catalyzed mixture thoroughly. 5. Allow for induction time; 15 – 30 minutes after mixing. **Laquer application** 6. Overcoat part marking and barcode label with prepared laquer. 7. Record materials info in Work Order Picklist. 8. Allow to dry/cure in accordance with AIPS. • Full cure at room temp **- 4 hours at 24°c** 9. Record curing start & finish time in Work Order Routing.	
240.	DN-ASSY	**Tedlar rework in accordance with AIPI 03-08-003 & AIPI 03-02-018 (If applicable).** **Note: Rework is needed in case of finding of any expose carbon on Tedlar area.** **Surface preparation** 1. Lightly abrade / sand as per AIPI 03-08-003 to the IML (Tedlar) surface using waterproof silicone carbide paper or fine non-woven nylon pads, grade 180 or 200 to remove all traces of contamination. Care should be taken to avoid damaging the fibres last ply. 2. Clean panel surface using cloth or tissue soaked with solvent IPA. After cleaning, the surface shall have clean, slightly matt appearance. 3. Dry the surface of panel. Ensure that the cleaned panel is not handled with bare hands after cleaning. **Pu66 material preparation** 1. Mix pore filler, material as per AIPI 05-02-009. • **Base (5467/0000) 4 (ratio by volume)** • **Activator (0734/9000) 1 (ratio by volume)**	

Pore filler mixing and curing.

COMMERCIAL DESIGNATION	MANUFACTURER	MIX	MIXING QUANTITY (g) (4)	MIX POT LIFE (MINUTES) (4)	CURE AT ROOM TEMP.	CURE AT HIGH TEMP. (3) (4)
PU-66	PRC-DESOTO	Parts by volume: A: 4 B: 1	≤ 100	240 (2)	12 hours	1 hours at 23°C + 3 hours at 60° C

NOTES:
1) It can be worked elapsed 6 hours from application.
2) Preliminary reaction time: 30 minutes.
3) Tolerances: ± 5°C for cure temperature and -0/+15 minutes for cure time.
4) These are guideline values.

2. Record materials details in Work Order Picklist.

Pore filler application

1. Apply pore hole filler as per AIPI 03-08-003 by using a squeegee or putty knife **if required**.
   Note: The application of pore filler must be complete within 45 minutes.
2. Remove excess pore filler using cloth or tissue soaked with solvent IPA.
3. Flash off at room temperature for 30 min minimum followed by **1 hour at 23 °c ± 5 °c and 3 hour at 60 °c ± 5 °c** as per AIPI 03-08-003.
4. Record start, finish time and temperature.
5. Abrade panel surface to remove excess filler. Ensure all the imperfections have been filled and a smooth surface for priming is achieved.

Inspection

1. Ensure surface preparation is in performed properly.
2. Ensure correct mixing ratio.
3. Ensure material details are recorded
4. Ensure good and smooth surface quality after finishing.

250.	DN-ASSY	**Electrical Bonding Test** **Operation** 1. Refer to **Figure 23.** 2. Perform electrical bonding test in accordance with TDS V57466015. 3. Record test result in Form 103D-F. **If this oper is not applicable, write "n/a" on Work Order Routing.**	

Summary of TDS requirement:

1. **Requirement of 280mOhms – A measurement on two resistance grommet.**

Each Bottom Panel, according to above table, will be submitted to a non destructive test in order to validate its conformity to Airbus Primary Bonding requirements.

Each panel will be tested in order to garantee that at least one couple of grommets has a resistance lower than 280 mOhms

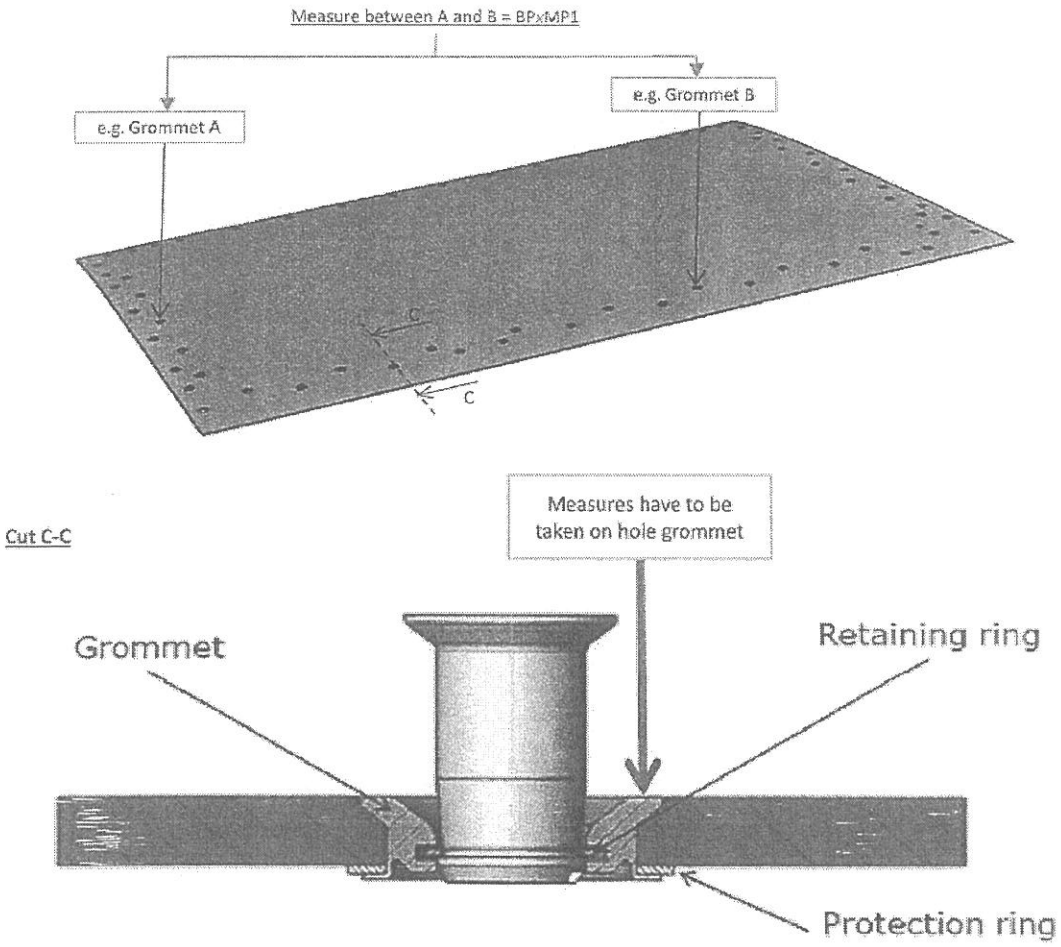


Figure 23: TDS V57466015 for Electrical Bonding Test requirement

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260.	DN-INSP	**Weigh Panel** **Operation** 1. Weight panel assy and record the value in Work Order Routing and form Insp 424 method of recording **(if applicable)**. **Note:** **If this oper is not applicable, write "n/a" on Work Order Routing.**	
270.	DN-INSP	**Final inspection** **Documents compilation** **Operation** 1. Visually inspect the panel appearance and condition; should comply with drawing **V57467051 and V57467056 requirement.** 2. Check all operations have been carried out satisfactorily. 3. Compile all required documentations together with the panel assy. **Close paperwork**	

* Format for date must be **DD/MM/YY**

FIRST ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0205-0024
ID: 4597864
Lot/Serial:
Item Number: M-V5746705600000
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 07/03/14
Due Date: 07/03/14
Routing Code: M-V5746705600000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
A-ABS1734C4V030M Stud ABS1734C4V030M	GR322498 8613704 AIPS01-03-002	52.0	EA 0	(52)					
A-ABS1734C4V050M Stud ABS1734C4V050M	GR201130 8516597 AIPS01-03-002	10.0	EA 0	(10)				16/7/14	
A-ABS1763C4P-03 Grommet sleeve ABS1763C4P-03	GR295370 8504589	62.0	EA 0	(10EA)				18/06/14	AC 739 PROD
A-ABS1763C4P-04 Grommet sleeve ABS1763C4P-04	GR322501 8529831	62.0	EA 0	(52EA)				18/06/14	AC 739 PROD

23/14

23/14

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIRST ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0205-0024
ID: 4597864
Lot/Serial:
Item Number: M-V5746705600000
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 07/03/14
Due Date: 07/03/14
Routing Code: M-V5746705600000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
A-GS-00-063		1.0	EA	(1.0)					
BAR CODE LABE	GR2857233		0						
ABS0970-00	S84997MM								
A-NSA5067-06-01		6.0	ea	(6.0)				17/7/14	
NUT, CLIP ,	GR308253		0						
NSA5067-06-01	S109720MAT								
A-V57466092202		1.0	ea	(1.0)				17/7/14	
LIP SEAL BRACKET	GR324430		0						
V57466092202	9000440								
A-V57466095200		1.0	ea	(1.0)				17/7/14	
LOWER LIP SEAL	GR327986		0						
V57466095200	V14010466								
ASC-008-013		6.0	EA	(6.0)				17/7/14	
NAS1102V06-9A	GR304664		0						
	S70438								

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIRST ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0205-0024 Issue Date: 07/03/14
ID: 4597864 Due Date: 07/03/14
Lot/Serial: Routing Code: M-V5746705600000-A
Item Number: M-V5746705600000 ORI WO:
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks: Sales/Job:
Qty Ordered: 1.0 EA Deliver To:
Qty Completed:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
ASC-008-013 SCREW, 100D HEAD,						*** Cont			
B-CH-00-008 PU 66 Bouche Pores 5467-0000	GR293126 GOC 23306 ~~FIC-A350S-14-101~~ FIC-A350S-MAY-14-101 AIMS 04-04-011	0.04	LT	(0.04LT) 0					AC 771 PROD AC 771 PROD E.I.E 23805 15/05/14
B-CH-00-009 PU 66 Activator 0735-9000	GR293107 SHC 18865 FIC-A350S-MAY-14-101 AIMS 04-04-011	0.01	LT	(0.01LT) 0		28/03/15		15/05/14	23805 AC 771 PROD
B-CH-00-010 PU 66 Thinner 0491-9000	GR280269 SHC 18190 FIC-A350S-MAY-14-101 AIMS 04-04-012	0.01	LT	(0.01LT) 0		31/03/15		15/05/14	23805 AC 771 PROD
B-CH-00-040 POLYURETHANE VARNI SH AERODUR CLEARCOAT UVR	GR274185 222256094 AIMS 04-04-012	0.01	LT	(0.02) 0		31/12/22 30/9/14		15/05/14 17/7/14	23805

Format for date must be DD/MM/YY REG._NO.:_229D-F

BFL-015-02 GR268727 (0.02) 31/10/14 17/7/14
Hardener 566/22R 222226066

AC 27 FPS
9/9/14
21629

WORK ORDER PICKLIST

Work Order: A350S-0205-0024
ID: 4597864
Lot/Serial:
Item Number: M-V5746705600000
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 07/03/14
Due Date: 07/03/14
Routing Code: M-V5746705600000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
B-CH-00-040						*** Cont			
BAD-015-00 Adhesion Promoter	GR31536S	5.0	GM	(8gm) 0					
MC115 (Kit25)	2133184 AIMS 04-05-012								
BFL-015-01 CHROM-FREE PRIMER-BASE	GR318916 0223246108	0.21	LT	(0.21LT) 0.15LT		30/6/14	6/6/14		
AERODUR BARRIER 37 045	PRI-A350S-MAY-14-101/103 AIMS04-04-002								
BFL-015-02 Hardener S66/22R	GR318917 0223319165	0.02	LT	(0.02 LT) 0.08		30/09/14	14/05/14	23805	
AIMS04-04-002	PRI-A350S-MAY-14-101/103								
BFS-013-03 Anti Static Paint-Thin	GR318921 0223324034	0.125	LT	(0.125LT) 0.15LT		15/11/15	14/05/14	23805	
Thinner (C 25/90 S)	PRI-A350S-MAY-14-101/103 AIMS 04-04-0012								
						19/11/15	14/05/14	23805	

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIRST ARTICLE INSPECTI

WORK ORDER PICKLIST

Work Order: A350S-0205-0024 Issue Date: 07/03/14
ID: 4597864 Due Date: 07/03/14
Lot/Serial: Routing Code: M-V5746705600000-A
Item Number: M-V5746705600000 ORI WO:
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks: Sales/Job:
Qty Ordered: 1.0 EA Deliver To:
Qty Completed:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
BFS-020-02 TOP COAT HARDENER	GR300026 0223203075	0.04	LT	(0.04 LT) 0					
Hardener 90150 AIMS 04-04-031	PUR-AVI-A350S-MAY-14-101					31/07/15		17/05/14	AC 771 PROD
BFS-020-03 TOP COAT ACTIVATOR	GR300473 0223148078	0.04	LT	(0.04 LT) 0					
Activator 99322 AIMS 04-04-031	PUR-AVI-A350S-MAY-14-101					31/05/16		17/05/14	AC 771 PROD
BFS-045-00 Anti Abrasion Pain t-Base CA9100 AIMS04-04-007	GR284425 GOC 22751	0.03	LT	(0.03 LT) 0	ANT-FRIC-A350S-MAY-14-101				AC 771 PROD
BFS-045-01 Anti Abrasion Pain t-Acti CA8000B AIMS04-04-007	GR284426 SHC 19602	0.013	LT	(0.011 LT) 0	ANT-FRIC-A350S-MAY-14-101	28/02/15		18/05/14	28805 AC 771 PROD
BFS-045-02 Anti Abrasion Pain t-Thin	GR277588 SHC 16354	0.013	LT	(0.011 LT) 0	ANT-FRIC-A350S-MAY-14-101	31/01/15 30/04/22		18/05/14 18/05/14	28805 AC 771 PROD 28805

Format for date must be DD/MM/YY

WORK ORDER PICKLIST

Work Order: A350S-0205-0024
ID: 4597864
Lot/Serial:
Item Number: M-V5746705600000
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 07/03/14
Due Date: 07/03/14
Routing Code: M-V5746705600000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
BFS-045-02						*** Cont			
CA8000C2	AIMS04-04-007								
BFS-057-00 Aviox 77702	GR320106 0393247229	0.07	LT	(0.08 LT) 0					
Base (White M8002)	AIMS 04-04-031								AC 771 PROD
BPR-019-01 AVIOX CF37124	PUR-AVI-A350S-MAY-14-101 GR314017 0223219071	0.075	LT	(0.075 LT) 0		30/09/15		17/05/14	
BASE	PRI-AVI-A350S-MAY-14-101 AIMS 04-04-031								AC 771 PROD
BPR-019-02 HS92245	GR310286 0223218077	0.038	LT	(0.038 LT) 0		31/08/14		16/05/14	23805
HARDENER	PRI-AVI-A350-MAY-14-101 AIMS 04-04-031								AC 771 PROD
BSL-021-03 Faying Surface Sea lant MC780 C4 Techkit 1 30	GR315367 13491060 AIMS 04-05-012	520.02	GM	(528) 0		31/08/14 30/6/14		16/05/14 6/6/14	23805 AC 771 PROD

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIR ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0205-0024 Issue Date: 07/03/14
ID: 4597864 Due Date: 07/03/14
Lot/Serial: Routing Code: M-V5746705600000-A
Item Number: M-V5746705600000 ORI WO:
D.NOSE PANEL 5 ASSY [LH] V5746705600000
Remarks: Sales/Job:
Qty Ordered: 1.0 EA Deliver To:
Qty Completed:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
BSL-021-03						*** Cont			
CCH-001-02 PFSR (CLEANING SOL VENT) ABR9-0140	GA3168350 1113C07345	0.05	LT	(0.5 LT) 0					
~~M-V5746705100000~~ ~~M=V5746605200000~~ D.NOSE PANEL 5 [LH] ~~V5746605200000~~ V5746705100000	A350-0203-0027	1.0	EA	(1 0) 0				17/7/14 09/09/14	AC 31 INSP
E.I.E 9/9/14 21629									

Format for date must be DD/MM/YY

FIRST ARTICLE INSPECTION

CT..M AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 0004	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
0101 0102	DN-PNTG	010.	**Check paperwork, panel & part marking.** Part description: PANEL 5 LH Part no.: V57467051 00000	19/04/14	23805		
		020.	Contamination removal application	19/04/14	23805		
		030.	Masking and cover up un-painted area	19/04/14	23805		
		040.	**Primer Aerodur 37045 preparation; Mixing Induction Time** Requirement: 15 – 30mins after mixing Start: 1730 Finish: 1800	14/05/14 E.I.E 23805 14/05/14 AC 771 PROD	AC 771 PROD 23805		
		050.	**1st Primer Aerodur 37045 application ; Oven drying** Requirement: 60 °c for 2 hours Time in: 1900 Time out: 2100 Temp: 65°C Oven no.: 03	14/05/14	AC 771 PROD 23805		

FIRST ARTICLE INSPECTION

CTRM AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 copy	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
			(If required) PU66 application ; Oven drying Requirement: 60 ˚c for 3 hours Time in: 1200 Time out: 1500 Temp: 65°C Oven no.: 03	15/05/14	AC 771 PROD 23805		
			2nd Primer Aerodur 37045 application ; Oven drying Requirement: 60 ˚c for 2 hours Time in: 1200 Time out: 1400 Temp: 65°C Oven no.: 03 Primer thickness: N/A	16/05/14	AC 771 PROD 23805		
			2nd Primer Aerodur 37045 thickness Requirement: 15-25µm Result: 23.4 µ				
		060.	Intermediate primer Aviox CF37124 préparation.	16/05/14	AC 771 PROD		
		070.	**Intermediate Primer Aviox CF37124 application ; Flash Off**				

Format for date must be DD/MM/YY

Reg. No.: 228CF

FIRST ARTICLE INSPECTION

CTI M AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 004	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
			Requirement: 3 hours Time start: 1700 Time finish: 2000 Temp: 67°C **Primer Aviox CF37124 thickness** Requirement: 8-12µm Result: 11.9 µm	16/05/14	AC 771 PROD 23805		
		080.	Top coat Aviox 77702 material preparation.	17/05/14	AC 771 PROD		
		090.	**Top Coat Aviox 77702 application ; Oven drying** Requirement: 60 °c for 2 hours Time in: 1930 Time out: 2130 Temp: 65°C Oven no.: 03 **Top Coat Aviox 77702 thickness** Requirement: 50-70µm Result: 67.2µ	17/05/14	AC 771 PROD		
		0100.	Anti friction CA9100 material preparation.	18/05/14	AC 771 PROD 23805		
		0110.	**Anti Friction CA9100 application ; Oven drying**				

FIRST ARTICLE INSPECTION

CTRM AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE: OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
			Requirement: 60 °c for 2 hours Time in: ~~1600~~ 6.1.6 23805 18/05/14 1730 Time out: ~~1800~~ AC 771 PROD 1930 Temp: 65°C Oven no.: 03 **Anti Friction CA9100 thickness** Requirement: 100-150µm Result: 147 µm	18/05/14 ~~081~~ 6.1.6 23805 18/05/14 AC 771 PROD	AC 771 PROD 23805		
		0120.	**Painting Inspection results** (Cross if fail) Orange peel: OK Specular Gloss: OK Specolour: OK	23/05/14			
		0130.	Assy Part marking (temporary)	26/05/14	AC 771 PROD 23805		
01401 01402	DN-ASSY	0140.	**Promoter MC115 application ; Room curing** Requirement: • Allow minimum 30 mins before sealant application. • Expired 4 hours after applied Time applied: 14.30 **Gasket Sealant MC780C4 application ; Room curing** Requirement: minimum 30 hours Date start: 6/6/14				

Format for date must be DD/MM/YY

Reg. No.: 228CF

CT. M AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 0034	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
			Time start: 15.00 Date finish: 7/6/14 Time finish: 21.00 **Gasket Sealant MC780C4 rework (if applicable) ; Room curing** Requirement: minimum 30 hours Date start: 9/6/14 Time start: 10.00 Date finish: 10/6/14 Time finish: 16.00 **Hardness test** Requirement: • More than Shore A40 • Deviation less than ±2 from mean result.	10/6/14			
		0150.	Csk sleeve holes (OML side)	17/6/14			
		0160.	Csk sleeve holes (IML side)	17/6/14			

Value	Shore A reading	Deviation
1	40	1.11
2	45	1
3	50	0.89
4	44	1.01
5	47	0.95
6	41	1.09
Mean	44.5	1

FIRST ARTICLE INSPECTION

CTRI. AERO-COMPOSITES SDN. E D.

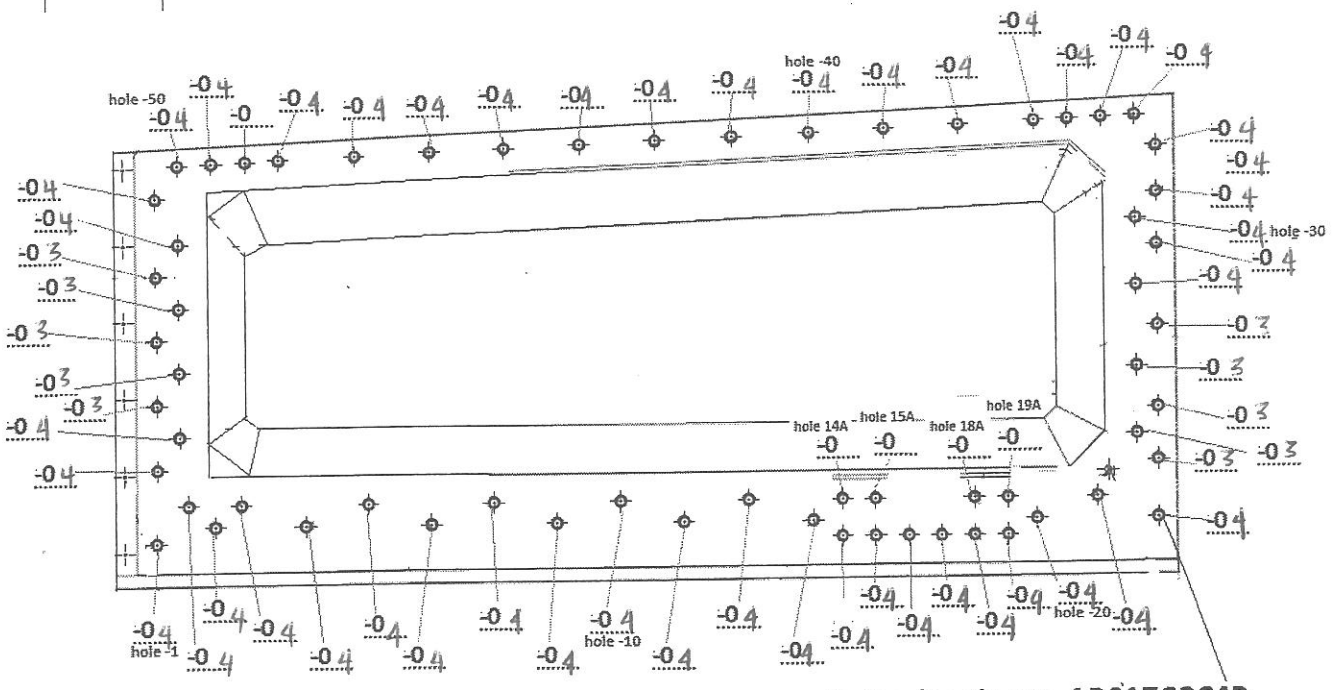
WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 0004	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0170.	Csk seal holes (OML side)	17/6/14	AC 321 PROD		AC 342 PROD
		0180.	Record sleeve quantity and usage distribution on panel.	18/6/14	AC 321 PROD		AC 342 PROD

Sleeve installation	
Type	**Quantity**
ABS1763C4P03	10 EA
ABS1763C4P04	52 EA
ABS1763C4P05	M/A



Holes for sleeve ABS1763C4P installation
(Qty = 62ea)

Format for date must be DD/MM/YY

Reg. No.: 228CF

FIRST ARTICLE INSPECTION

CTI...I AERO-COMPOSITES SDN. ...HD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0190.	**Gap filling; Room curing** Requirement: minimum 30 hours Date start: 14/7/14 Time start: 09.00 Date finish: 15/7/14 Time finish: 15.00	15/7/14			AC 142 INSP
		0200.	Stud installation	16/7/14			AC 142 INSP
		0210.	Seal Installation	17/7/14			AC 142 INSP
		0220.	Part Marking & Barcode label	17/7/14			AC 142 INSP
		0230.	**Laquer Aerodur Clearcoat UVR application ; Room drying** Requirement: Minimum 4 hours Time start: 10.00 Time finish: 14.00	17/7/14			AC 142 INSP
		0240.	**Tedlar Rework with PU66;** Requirement: 1 hour at room temperature + 3 hours at 60°C Time start: 15.00 Time finish: 18.00 Oven Temperature: 60°c	17/7/14			AC 142 INSP

FIRST ARTICLE INSPECTION

CTR AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0205 copy	A350SON-0205-01	A	M-V5746705600000-A	24/12/2013

Part No	Description	Part Issue
V5746705600000	A350XWB (D.NOSE) : PANEL 5 ASSY LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0250.	Electrical Bonding test	17/07/14			AC 142 INSP
02601	DN-INSP	0260.	**Panel weight** 5.5 kg	09/07/14			
		0270.	Documents compilation 1) compile all required documentation 2) compile test panel result 3) close paperwork	09/07/14			

CTRM AERO-COMPOSITES SDN. BHD.

FIRST ARTICLE INSPECTIO

PA | PICKLIST ATTACHMENT

Work Order # : A3505- ~~0204~~ 0205 - 0034 (initialled 03400 9/9/14)

ID : 4597864

Part Number: : **V5746705600000**

FRIDGING/ KIT MATERIAL LIFE RECORD

Material			Out	Date*	Time	Out	Date*	Time	Time At Oven On
Ambient Life Left (hour)			Out Time Remaining (hour)			Out Time Remaining (hour)			am / pm
Stamp			Stamp			Stamp			Stamp
In	Date*	Time	In	Date*	Time	In	Date*	Time	

Material			Out	Date*	Time	Out	Date*	Time	Time At Oven On
Ambient Life Left (hour)			Out Time Remaining (hour)			Out Time Remaining (hour)			am / pm
Stamp			Stamp			Stamp			Stamp
In	Date*	Time	In	Date*	Time	In	Date*	Time	

Material			Out	Date*	Time	Out	Date*	Time	Time At Oven On
Ambient Life Left (hour)			Out Time Remaining (hour)			Out Time Remaining (hour)			am / pm
Stamp			Stamp			Stamp			Stamp
In	Date*	Time	In	Date*	Time	In	Date*	Time	

* Format for date must be **DD/MM/YY**

CTRM AERO-COMPOSITES SDN. BHD.

PA PICKLIST ATTACHMENT

Work Order # : A330-0205-0054

ID : 459864

Part Number: : **V5746705600000**

CONCESSION					
Application No.	Concession No.	Description Of Defect	Date	Operator	Inspector

ADDITIONAL DOCUMENT				
No.	Document Number	Description	Date	Person in charge

* Format for date must be **DD/MM/YY**

CTRM
AERO-COMPOSITES

SUB-ASSEMBLY/ASSEMBLY WEIGHT REPORT

Customer: **SONACA**

Report No.: CTRMAC-FAI/SONACA/DN-128

Inspection Location: **FINAL**

Part No.: **V5746756 000 00**

Aircraft Type: **A350XWB**

Issue: **-A.2**

Description of Part: **BOTTOM PANEL 5 ASSY - LH**

Serial No. **0025**

Date Weighed: **9/9/2014**

Protective Finish:

- ☐ Primer paint
- ☒ Finish paint
- ☐ No paint
- ☐ Others, please specify

Inspector's Stamp

Assembly as Weighed:

5.6 kg

Remarks:

CTRM
AERO COMPOSITES

PROJECT : A350 XWB (BOTTOM PANEL)
PART NO : V57467051 000 00
DESCRIPTION: D. NOSE PANEL 5 - LH
SERIAL NO : 0027
PART ISSUE : -A.2

FAI DATA PACK :

1.	COVER SHEET	√
2.	FORM 1	√
3.	FORM 2	√
4.	FORM 3	√
5.	CORE PROCESSING REPORT	√
6.	LAY-UP INSPECTION REPORT	√
7.	CURING REPORT	√
8.	CMM REPORT	√
9.	NDT REPORT	√
10.	CNC REPORT	√
11.	DIMENSIONAL INSPECTION REPORT	√
12.	TOOL ING INSPECTION REPORT	
13.	WORK INSTRUCTION (W/I)	√
14.	TEST RESULT	√
15.	DRAWING	√
16.	WEIGHT REPORT	√

Prepared by:	Checked by:
(Signature/stamp & date) AC 106 INSP 19/10/14	*(Signature/stamp & date)* AC 44 QA 21/10/14
Name: IZZATE BINTI KHASBULLAH	Name: AMINAH BT KAMALLUDIN
Quality Inspector	*Quality Engineer*

CTRM aero composites	**FAIR Cover Sheet**	**FAI Report Number:** CTRMAC-FAI/SONACA/DN-127
		Purchase Order No:4500175924
		Prepared for (Customer):SONACA
		Date: 03 SEPTEMBER 2014

SUPPLIER COMPANY INFORMATION	
Supplier Name: CTRM AERO COMPOSITES	**Telephone No.:** 06 3171007
Address: Batu Berendam, 75350 Melaka,Malaysia	

PART / KIT INSPECTED		
Program/ Project: A350 XWB SONACA	**Product Specification No:** N/A	
Part/ Kit Number: V57467051 000 00	**Drawing Issue:** A.2	**Part Issue:** -A.2
Part Description: BOTTOM PANEL 5 LH	**Build Standard:** N/A	
	Job Order No.: A350S-0203-0027	
Part Serial No.: 0027		

Type of First Article Inspection (Tick as appropriate): **Full First Article Review** √ **Partial First Article Review**

Reason for Full FAI/ Partial FAI: ***NEW MOD MSN 021 AS DRAWING SET VERSION –A.2.***

SUBJECTS FOR VERIFICATION	ACCEPT	NOT ACCEPT	N/A	REMARKS
SECTION A: PRIOR of FIRST ARTICLE VERIFICATION				
PO/ Condition of Supply (CoS)	☒	☐	☐	4500175924 (ATTACHMENT) .
Configuration (Drawing, Model, Ply development etc.)	☒	☐	☐	DT-CDI-1275-13 CUSTOMER REFERENCE & CM 0591-13 CTRM NO.
Manufacturing & Inspection Planning	☒	☐	☐	
Tool Thermal Survey Report	☐	☐	☒	
Manufacturing Tech Sheet/ CMR	☒	☐	☐	
Non-destructive Test (Tech. Sheet, Ref. Panel etc.)	☒	☐	☐	CTRMAC/SONACA TECH 0004/0006
Qualification (e.g. FPQ, Process, etc.)	☐	☐	☒	FPQ IS NOT REQUIRED
SDR/ DPD & MBD	☒	☐	☐	
ATP (Consent given by customer to proceed manufacturing if any above item is unacceptable)	☐	☐	☒	
SECTION B: FIRST ARTICLE VERIFICATION				
Purchase Order	☒	☐	☐	
Configuration (Drawing, Model, Ply development etc.)	☒	☐	☐	
Material Verification	☒	☐	☐	
Planning	☒	☐	☐	
Tooling & Equipment	☒	☐	☐	
Processing	☒	☐	☐	
Specification Compliance	☒	☐	☐	
Heat Treatment	☐	☐	☒	
Non-destructive Test (NDT) & In-Process Test (IPT)	☒	☐	☐	
Dimensional Inspection	☒	☐	☐	
ICY	☐	☐	☒	
Surface Finish	☒	☐	☐	
Weight Report	☒	☐	☐	
Identification	☒	☐	☐	
Non conforming issues closure	☒	☐	☐	SONACA REPORT NO.: 201403338 CUSTOMER NCR NO.: 5A-004605256

Remarks:

Justify if any verification item above is unacceptable/ incomplete but accepted by customer for delivery/ next process, e.g.: ATS, PTS, CTS etc,- attach with this form)

Has First Article certification been achieved?		**Yes**	√	**No**	Tick as appropriate
Is the item acceptable for use?	√	**Yes**		**No**	Tick as appropriate

Prepared by: (Supplier QC Inspector's signature and stamp)	AC 106 INSP	**Approved by:** (Supplier Quality Representative's signature and date)	AC 44 QA 3/11/14
	Name: IZZATE BINTI KHASBULLAH		**Name:** AMINAH BT KAMALLUDIN

SAE AS9102 Revision A

Form 1: Part Number Accountability

Sheet 1 of _1__

1. Part Number V57467051 000 00	2. Part Name BOTTOM PANEL 5 LH	*3. Serial Number* *0027*	4. FAI Report Number CTRMAC-FAI/SONACA/DN-127
5. Part Revision Level *-A.2*	*6. Drawing Number* *V57467051*	*7. Drawing revision level* *-A.2*	*8. Additional Changes* *N/A*
9. Manufacturing Process Reference Work order A350SON-0203-0027 (WOR)	10. Organization Name CTRM Aero Composites SDN.BHD	11. Supplier Code 17995	12. P.O Number 4500175924
13. Detail FAI ☒ Assembly FAI ☐	14. Full FAI ☒ Partial FAI ☐	*Baseline Part Number including revision level*	
	Reason for Full FAI: NEW MOD MSN 021 AS DRAWING SET VERSION –A.2.		

a) if above part number is detail part only, go to Field 19
b) if above part number is an assembly, go to "INDEX" section below.

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number	*16. Part Name*	*17. Part Serial Number*	18. FAI Report Number
V5746705122000	H. CORE PANEL 5 LH	CP 0031	N/A

1) Signature indicates that all characteristic are accounted for; meet drawing requirements or are properly documented for disposition.

2) Also indicate if the FAI is complete per Section 5.4: ☐ FAI complete ☒ FAI not complete

19. Signature	IZZATE BINTI KHASBULLAH	20. Date 05 November 2014
21. Reviewed by	AMINAH BINTI KAMALLUDIN AC 44 QA	22. Date 3 Nov 14
23. Customer Approval		24. Date

SAE AS9102 Revision A

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es), Functional Testing

Sheet 1 of _2__

1. Part Number V57467051 000 00	2. Part Name BOTTOM PANEL 5 LH		3. Serial Number 0027		4. FAI Report Number CTRMAC-FAI/SONACA/DN-127
5. Material or Process Name	*6. Specification Number*	7. Code	*8. Special Process Supplier Code*	*9. Customer Approval Verification (Yes/No/NA)*	*10. Certification of Conformance Number*
ADHESIVE FILM FM300M03	IPS10-01-006-02	N/A	AUK/SA/30205	YES	GR 316315
MODIFIED EPOXY ADHESIVE EC 2216 PART B/A GRAY	AIMS 10-07-004	N/A	201856	YES	GR 304000
LOCTITE HYSOL (GRADE B) EA9695.05K	IPS10-01-006-01	N/A	AUK/SA/100469	YES	GR 313587
BRONZE MESH Sn6/8552/RC38 AW80	IPS05-12-001-02	N/A	AUK/SA/30199	YES	GR 313403
SURFACE MASTER 905 SM905M. 045 psf 48"	AIMS 10-06-001	N/A	AUK/SA/30205	YES	GR 285710
CARBON WOVEN@1070mm 8552S/37%/AGP280/C	AIMS 05-01-004	N/A	AUK/SA/30199	YES	GR 314761
GLASS EPOXY @ 1270mm 8552/7781,RC37	AIMS 05-02-003	N/A	AUK/SA/30199	YES	GR 313475
TEDLAR (TGH15BL3)	DAN95M	N/A	AUK/SA/30205	YES	GR 226627
BAG FM – WL7400-54"CF	N/A	N/A	CTRMAC/2-A/006	YES	GR 306016
BREATHER N10	N/A	N/A	CTRMAC/2-A/006	YES	GR 309616
SEALANT TAPE (GS213)	N/A	N/A	CTRMAC/2-A/006	YES	GR 303122
PEEL PLY (60B/R 700mm)	N/A	N/A	CTRMAC/2-A/006	YES	GR 261318
RELEASE FILM NP TYGAVAC RF-242-R	N/A	N/A	CTRMAC/2-A/006	YES	GR 309305
PREPARATION OF HOLES IN FIBRE REINFORCED PLASTIC (FRP) AND MIXED (FRP/METAL) ASSEMBLIES FOR FASTENING	AIPS 01-02-005 AIPI 01-02-005	N/A	10204	YES (ATP)	ME 1261632
MANUFACTURE OF STRUCTURAL SANDWICH PARTS WITH THERMOSETTING FIBER REINFORCED SKINS	AIPS 03-02-018 AIPI 03-02-018	N/A	10204	YES	ME 1250535
MANUFACTURE OF MONOLITHIC PARTS WITH THERMOSET PREPREG MATERIALS	AIPS 03-02-019 AIPI 03-02-019	N/A	10204	YES	ME 1216655
MACHINING OF FIBRE REINFORCED PLASTIC (FRP) COMPONENTS	AIPS 03-07-002 AIPI 03-07-002	N/A	10204	YES	ME 1216655
11. Functional Test Procedure Number	**12. Acceptance report number, if applicable**				
N/A	N/A				

13. Comments

14. Prepared By	15. Date
IZZATE BINTI KHASBULLAH	03 SEPTEMBER 2014

SAE AS9102 Revision A

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es), Functional Testing

Sheet 2 of _2__

1. Part Number V57467051 000 00	2. Part Name BOTTOM PANEL 5 LH		3. Serial Number 0027		4. FAI Report Number CTRMAC-FAI/SONACA/DN-127
5. Material or Process Name	*6. Specification Number*	7. Code	*8. Special Process Supplier Code*	*9. Customer Approval Verification (Yes/No/NA)*	*10. Certification of Conformance Number*
REWORK OF STRUCTURES MANUFACTURED FROM COMPOSITE MATERIALS (LAMINATES AND SANDWICH)	AIPS 03-08-003 AIPI-03-08-003	N/A	10204	YES	ME 1243626
APPLICATION OF EXTERNAL PAINT SYSTEMS WHITE	AIPS 05-02-003 AIPI 05-02-003	N/A	10204	YES	ME 1261632
NON DESTRUCTIVE INSPECTION OF COMPOSITE PARTS	AITM 6-0011	N/A	10204	YES	ME 1252931
REFERENCE STANDARDS FOR NON-DESTRUCTIVE INSPECTION METHODS ON FIBRE COMPOSITES	AITM 6-0012	N/A	10204	YES	ME 1252931
CORE	ABS 5341C1	N/A	P619377-02-009	YES	GR 269472

11. Functional Test Procedure Number	12. Acceptance report number, if applicable
N/A	N/A

13. Comments

14. Prepared By	15. Date
IZZATE BINTI KHASBULLAH	03 SEPTEMBER 2014

SOCIÉTÉ NATIONALE DE CONSTRUCTION AÉROSPATIALE

SONACA S.A.

PARC INDUSTRIEL - ROUTE NATIONALE CINQ - 6041 GOSSELIES

T.V.A. BE 0418.217.577 - RPM Charleroi - R.C. Charleroi 125.639 - Téléphone : 32-71-25.51.11 - Téléfax : 32-71-34.53.55

17995

Purchase Order

4500175924 / 13.11.2013

Reference to use in any mail

CTRM AERO COMPOSITES
1028 LOCKED BAG
PEJABAT POS BESAR
75150 MELAKA
MALAISIE

For the attention of Wan Najihah Abdullah

Delivery address :
SONACA sa
Rue des Cerisiers
B-6041 GOSSELIES

Incoterms DDU SONACA S.A. - Gosselies
Payment 60 days invoice date Currency USD

Fax : 00 606-3170354

The General purchasing conditions of SONACA S.A. are applicable to this purchase order. By accepting the order, the supplier waives any application of the provisions contained in its general or specific conditions of sale, even if they are applicable to the exclusion of all other conditions. If you do not have anymore copy of the general conditions of purchase of SONACA S.A., you can get another, *before accepting this order*, with the contact person mentioned on this purchase order.

MSN 19, 20, 21, 22, 23, 24, 25, 26
FAI to be submitted for MSN 21 (Panel 5, RH and LH)
The price is updated from MSN 21 (MSN 21 - MSN 26)
Price/SS until MSN 20: 25 818. 69 USD
Price/SS from MSN 21: 26 276.35 USD
Please send your acknowledgement for the following items

Item	Description	Quantity	Unit price (USD)	Total Price (USD)
00010	BOTTOM PANEL 1 ASSY Delivery date 30 aug 2014 Our Material N° V57466016 002 00	2 EA	[redacted]	[redacted]
			Magasin KST Porte :11	
	Order reason 034 Long customer number : V57466016 002 00			
MSN 19-20	Following drawing V57466016 rev.C1 and Part List rev. C2			
	We provide you the following materials V00066093 200 00 LOWER LIP SEAL NSA5067-06-1 NUT CLIP SELF LOCKING FLOATING STEEL NAS1102V06-9A SCREW MACH.FLAT100°HEAD FULLTHREAD TITAN V57466092 200 00 LIP SEAL BRACKET		2 EA 6 EA 6 EA 2 EA	
00020	BOTTOM PANEL 1 ASSY Delivery date 30 aug 2014	2 EA	[redacted]	[redacted]

Authorized signature

Your contact : Natalia GONCHAROVA

SOCIÉTÉ NATIONALE DE CONSTRUCTION AÉROSPATIALE

SONACA S.A.

PARC INDUSTRIEL - ROUTE NATIONALE CINQ - 6041 GOSSELIES

T.V.A. BE 0418.217.577 - RPM Charleroi - R.C. Charleroi 125.639 - Téléphone : 32-71-25.51.11 - Téléfax : 32-71-34.53.55

17995

Purchase Order

4500175924 / 13.11.2013

reference to use in any mail

CTRM AERO COMPOSITES
1028 LOCKED BAG
PEJABAT POS BESAR
75150 MELAKA
MALAISIE

For the attention of Wan Najihah Abdullah

Item	Description	Quantity	Unit price (USD)	Total Price (USD)
	NSA5067-06-1 NUT CLIP SELF LOCKING FLOATING STEEL		12 EA	
	NAS1102V06-9A SCREW MACH.FLAT100°HEAD FULLTHREAD TITAN		12 EA	
00100	BOTTOM PANEL 5 ASSY	2 EA	[redacted]	[redacted]
	Delivery date 30 aug 2014			
	Our Material N° V57466056 003 00			
			Magasin KST Porte :11	
	Order reason 034			
MSN 19-20	Long customer number : V57466056 003 00			
	Following drawing V57466056 rev.C1 and Part List rev. C2			
	We provide you the following materials			
	V57466092 202 00 LIP SEAL BRACKET		2 EA	
	V00066095 200 00 LOWER LIP SEAL		2 EA	
	NSA5067-06-1 NUT CLIP SELF LOCKING FLOATING STEEL		12 EA	
	NAS1102V06-9A SCREW MACH.FLAT100°HEAD FULLTHREAD TITAN		12 EA	
00110	BOTTOM PANEL 5 ASSY	2 EA	[redacted]	[redacted]
	Delivery date 18 sept 2014			
	Our Material N° V57467056 000 00			
			Magasin KST Porte :11	
	Order reason 034			
MSN 21 - 22	Long customer number : V57467056 000 00			
	Following drawing V57467056 rev.A2 and Part List rev. A2			
00120	BOTTOM PANEL 5 ASSY	2 EA	[redacted]	[redacted]
	Delivery date 18 sept 2014			
	Our Material N° V57467056 001 00			
			Magasin KST Porte :11	
	Order reason 034			
	Long customer number : V57467056 001 00			
	Following drawing V57467056 rev.A2 and Part List rev. A2			
00130	BOTTOM PANEL 1 ASSY	4 EA	[redacted]	[redacted]
	Delivery date 01 oct 2014			
	Our Material N° V57466016 002 00			
MSN 23-26			Magasin KST Porte :11	
	Order reason 034			
	Long customer number : V57466016 002 00			

Authorized signature

Your contact : Natalia GONCHAROVA

SONACA

NON CONFORMANCE REPORT – 201403338

NCR type : MRB - MRB
Subcontractor NCR No : E-11897
Customer NCR No : SA-004605256

Status : In progress
Creation date : 14/05/2014 06:18:00
Originator : KAMALLUDIN, Aminah

Contract : A350 - SL&DN
Part Number : V57467051 000
Part name : BOTTOM PANEL 5 LH
SA or SN : 0027
MSN :

Dwg No : V57467051
Issue : -A2

Work order : A350S-0203-0027
Batch quantity : 1 Part

NC detection area :
NC origin area : Your company
Subcontractor name :
Defect : Part & Assembly/ Part : out of specification
NC description :
OML SURFACE PROFILE OUT OF TOLERANCE
OCCUR IN MOD MSN 21 (ENLARGE CORE SIZE)

NC quantity : 1

Attachments :

Disposition

Preliminary disposition :	Production	Quality
acceptable as is Identify with ncr number	N/A	AC 44 QA

Final disposition :	Production	Quality
Note non-conformity description in CofC number : CTRMAC-14-3383	N/A	AC 44 QA

Closure date : 29/07/2014 17:00:00
NC disposition application area : Final Inspection.
NC closure :

Final inspection stamp :

AC 31 INSP

SONACA S.A.	Drawing Set Number : V57467051	Drawing Set Version : - A2	Maturity : APPROVED_STEP2	Drawing Set Description : BOTTOM PANEL 5	ECN
	Program Work Package : A350 LE - SLAT	Index ECN : 000	Format ECN : 3	Extracted date : 2013-10-07	Approved date : 2013-10-07

Change reason : NEW COLOUR CHART REQUEST BY AIRBUS, INCONSISTENCE BETWEEN PLY TABLE ON DRAWING AND 3D MODEL.

Change description :

INTRODUCED MOD 104432 (WHITE COLOR).

------ ONLY FOR SONACA SIDE -----

3D models WRF updated :

WE HAVE TWO PLY 8 AND 9 ON PLIES GROUP 1 AND PLIES GROUP 2

- RENAME PLY 8 BY PLY 10
- RENAME PLY 9 BY PLY 11
- RENAME PLY 10 BY PLY 12
- RENAME PLY 11 BY PLY 13
- RENAME PLY 12 BY PLY 14
- RENAME PLY 13 BY PLY 15
- RENAME PLY 14 BY PLY 16
- RENAME PLY Tedlar BY PLY 18 Tedlar
- RENAME PLY A.1 BY A2
- RENAME PLY 17 BY A1
- RENAME PLY A2 BY A1
- RENAME PLY A18 BY A2

ON BOM :

ADD G006, FN070

DN1596 AIRBUS CODE 006 BECOME 060

DELETE FN0004

DN0688 "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < CA9100, M9001 > " REPLACED BY "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, ABRASION RESISTANT PAINT < WHITE M8002 ACCORDING TO CODE NA008 >"

DN0689 "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < AVIOX FINISH 77702, M9001 >" REPLACED BY "APPLICATION OF EXTERNAL PAINT SYSTEMS ACCORDING TO AIPS 05-02-003, TOP COAT < WHITE M8002 ACCORDING TO CODE NA005 >"

DN0698 NOT APPLICABLE.

FOR ALL SHEET :

ADD BOX COMPONENT OF ICY PART, AND NOTE NOTE 70

SHEET 1 :

SECTION A1-A1 REMOVE NOTE FOR DN0698

DETAIL T1-1 REMOVE NOTE FOR DN0698
DETAIL V1-1 REMOVE NOTE FOR DN1596
SHEET 4 :
DELETE OPTIONAL MARKING, CHANGE MARKING : WAS - > T / IS - > B
SHEET 7 :
COMPOSITE ENGINEERING REQUIREMENTS ADDITIONAL SHEET REPLACED BY COMPOSITE ENGINEERING REQUIREMENTS SHEET

Drawing Modifications[1]

Type	Number	Proposal	Description	Start Msn[2]
MAIN	102010	L00224	INTRODUCE DROOP NOSE BLOW DOWN PANEL OPTIMISATION	21

Picture sheets

Status	Number	Revision
R	1	002
R	2	002
R	3	002
R	4	002
R	5	002
R	6	002
R	7	002

V57467051000

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467051000	000	BOTTOM PANEL 5	unchanged		V57467051000	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	010	V57467051010	SKIN PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		SEERK

Notes

Status	Code
C	DN 0066 [006]
S	DN 0684 [060]
R	DN 0688 [061]
R	DN 0689 [062]
S	DN 0698 [063]
R	DN 1596 [060]
R	FN 0004 [070]

V57467051001

Part Information

Status	Part Number	Item[1]	Description[1]	Weight[1]	ICY (Class-Index)[1]	Old Part Number	Old Version	Proposal Stock Disposition[1]
R	V57467051001	001	BOTTOM PANEL 5	unchanged		V57467051001	-A1	REWORK

Components

Classics

Status	Item	PartNumber	Description	Delta Quantity
R	011	V57467051011	SKIN PANEL 5	

Material and Process Data

Status	Revision	Sonaca Protection Code	Customer Protection Code
R	002		SEERK

Notes

Status	Code
C	DN 0066 [006]
S	DN 0684 [060]
R	DN 0688 [061]
R	DN 0689 [062]

SONACA S.A.	Drawing Set Number : V57467051	Drawing Set Version : - A2	Maturity : APPROVED_STEP2	Drawing Set Description : BOTTOM PANEL 5	ECN
	Program Work Package : A350 LE - SLAT	Index ECN : 000	Format ECN : 3	Extracted date : 2013-10-07	Approved date : 2013-10-07

Status	Code
S	DN 0698 [063]
R	DN 1596 [060]
R	FN 0004 [070]

V57467051010

Part Information

Status	Part Number	Item [1]	Description [1]	Weight [1]	ICY (Class-Index) [1]	Old Part Number	Old Version	Proposal Stock Disposition [1]
R	V57467051010	010	SKIN PANEL 5	unchanged		V57467051010	-A1	UNAFFECTED

V57467051011

Part Information

Status	Part Number	Item [1]	Description [1]	Weight [1]	ICY (Class-Index) [1]	Old Part Number	Old Version	Proposal Stock Disposition [1]
R	V57467051011	011	SKIN PANEL 5	unchanged		V57467051011	-A1	UNAFFECTED

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.1	B : METAL TAGS ATTACHED TO PART OR BAG AND LABEL	000	NA000

Composite Materials

Mat. Revision	Material ID	Type	Product	Name	Specification	Caract.Dim.	Airbus Code	Airbus Item
-A.1	580	ADHESIVE	ADHESIVE FILM-KNIT CARRIER	EA9695K05	ABS5320BK01	0.25 mm	ABS5320BK01	580
-A.1	583	ADHESIVE	ADHESIVE FILM-MAT CARRIER	FM300M03	ABS5320AM02	0.13 mm	ABS5320AM02	583
-A.1	592	CARBON FIBER	PREPREG FABRIC	8552S/37 PERCENT/AGP280/C	ABS5003B0000-03	0.28 mm	ABS5003B0000-03	592
-A.1	595	GLASS FIBER	PREPREG FABRIC	8552/37 PERCENT/7781	ABS5009F40EP250	0.25 mm	ABS5009F40EP250	595
-A.1	572	MESH	PREPREG BRONZE MESH	8552/CUSN6 RC38	ABS5317AA2-02	NaN mm	ABS5317AA2-02	572
-A.1	591	MISCELLANEOUS	INSULATION FILM	TGH15BL3	DAN95M	NaN mm	DAN95M	591
-A.1	590	MISCELLANEOUS	SURFACING FILM	SURFACE MASTER, SM905	ABS5245B220-06	0.164 mm	ABS5245B220-06	590

PROTECTION Notes : 208 C

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003

V574 67051 011

Part Information

Item !	Part Number	Version	Description !	Weight (kg) !	Weight Category	Criticity Class	ICY Class
011	V574 67051 011	-A.2	SKIN PANEL 5	4.7945	C	2S	N/A : NOT SPARES

ICY Reference !	ICY Index !

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	SOL	-	-A.2	002	1	SKIN PANEL 5	
02B11	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.1	B : METAL TAGS ATTACHED TO PART OR BAG AND LABEL	000	NA000

Composite Materials

Mat. Revision	Material ID	Type	Product	Name	Specification	Caract.Dim.	Airbus Code	Airbus Item
-A.1	580	ADHESIVE	ADHESIVE FILM-KNIT CARRIER	EA9695K05	ABS5320BK01	0.25 mm	ABS5320BK01	580
-A.1	583	ADHESIVE	ADHESIVE FILM-MAT CARRIER	FM300M03	ABS5320AM02	0.13 mm	ABS5320AM02	583
-A.1	592	CARBON FIBER	PREPREG FABRIC	8552S/37 PERCENT/AGP280/C	ABS5003B0000-03	0.28 mm	ABS5003B0000-03	592
-A.1	595	GLASS FIBER	PREPREG FABRIC	8552/37 PERCENT/7781	ABS5009F40EP250	0.25 mm	ABS5009F40EP250	595
-A.1	572	MESH	PREPREG BRONZE MESH	8552/CUSN6 RC38	ABS5317AA2-02	NaN mm	ABS5317AA2-02	572
-A.1	591	MISCELLANEOUS	INSULATION FILM	TGH15BL3	DAN95M	NaN mm	DAN95M	591
-A.1	590	MISCELLANEOUS	SURFACING FILM	SURFACE MASTER, SM905	ABS5245B220-06	0.164 mm	ABS5245B220-06	590

PROTECTION Notes : 208 C

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003

V574 67051 220

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
220	V574 67051 220	-A.1	HONEYCOMB	0.6297	C	2S	N/A : NOT SPARES

ICY Reference [1]	ICY Index [1]

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	SOL	-	-A.1	001	1	HONEYCOMB	
02D12	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	
04R02	v5	DRW	4	-A.2	002	1	BOTTOM PANEL 5	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.1	B : METAL TAGS ATTACHED TO PART OR BAG AND LABEL	000	NA000

Metallic Materials

Mat. Revision	Type	Product	Alloy	Initial State	Final State	Specification	Caract.Dim.	Airbus Code
-A.1	NON METALLIC HONEYCOMB	ARAMID HONEYCOMB	N-636 POLYAMIDE PAPER	-	-	ABS5341C1-250	25 mm	ABS5341C1-250

Length	Width	Thickness	Diameter
879	424	25	

BASIC Notes : 109 B

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	007	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0293	-A.1	008	N	ACTIVE	ALL	IDENTIFICATION BY BAG AND TAG PER AIPS 08-02-003
DN 0848	-A.1	009	N	ACTIVE	ALL	MACHINING OF HONEYCOMB CORE DETAILS FOR SANDWICH CONSTRUCTION

PROTECTION Notes : 208 C

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.1	010	N	ACTIVE	ALL	REFER TO THE 3D MODEL FOR REFERENCE.

V574 67051 221

Part Information

Item [1]	Part Number	Version	Description [1]	Weight (kg) [1]	Weight Category	Criticity Class	ICY Class
221	V574 67051 221	-A.1	HONEYCOMB	0.6297	C	2S	N/A : NOT SPARES

ICY Reference [1]	ICY Index [1]

Picture sheets

Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	SOL	-	-A.1	001	1	HONEYCOMB	
02D12	v5	DRW	2	-A.2	002	1	BOTTOM PANEL 5	
04R02	v5	DRW	4	-A.2	002	1	BOTTOM PANEL 5	

Material and Process Data

MP Revision	Marking Process	SONACA Protection Code	Customer Protection Code
-A.1	B : METAL TAGS ATTACHED TO PART OR BAG AND LABEL	000	NA000

Metallic Materials

Mat. Revision	Type	Product	Alloy	Initial State	Final State	Specification	Caract.Dim.	Airbus Code
-A.1	NON METALLIC HONEYCOMB	ARAMID HONEYCOMB	N-636 POLYAMIDE PAPER	-	-	ABS5341C1-250	25 mm	ABS5341C1-250

Length	Width	Thickness	Diameter
879	424	25	

BASIC Notes : 109 B

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0058	-A.1	007	N	ACTIVE	ALL	THE GEOMETRICAL MASTER IS THE 3D MODEL
DN 0293	-A.1	008	N	ACTIVE	ALL	IDENTIFICATION BY BAG AND TAG PER AIPS 08-02-003
DN 0848	-A.1	009	N	ACTIVE	ALL	MACHINING OF HONEYCOMB CORE DETAILS FOR SANDWICH CONSTRUCTION

PROTECTION Notes : 208 C

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
DN 0214	-A.1	100	N	ACTIVE	ALL	SONACA PROTECTION CODE PER PS 6.0003
DN 0215	-A.1	101	N	ACTIVE	ALL	AIRBUS PROTECTION CODE PER TN.A.007.10003

FREE Notes : FREE

Note Code	Note Revision	Airbus Code	Airbus Flag	Status	Item	Text
FN 0001	-A.1	010	N	ACTIVE	ALL	REFER TO THE 3D MODEL FOR REFERENCE.

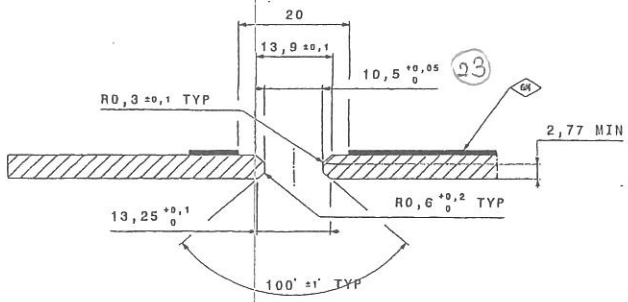
Drawing Sheet only

Picture sheets

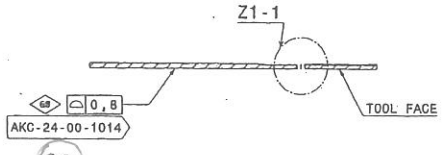
Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	DRW	5	-A.2	002	1	BOTTOM PANEL 5	

[1] : *This data is for information only until 'APPROVED STEP2' Maturity*

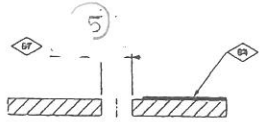
Zone	Software	Type	Sheet	CAD Revison	Revision	Iteration	Description	Sub Description
-	v5	DRW	6	-A.2	002	1	BOTTOM PANEL 5	
-	v5	DRW	7	-A.2	002	1	BOTTOM PANEL 5	



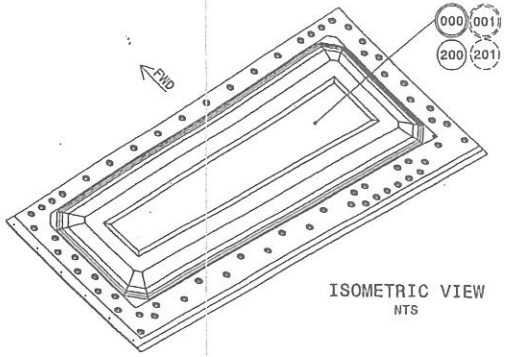
DETAIL Y1-1
Scale: 3:1
TYPICAL VIEW VALID FOR ALL DOUBLE COUNTERSUNK HOLES



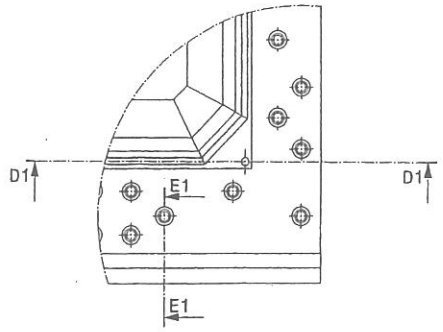
SECTION D1-D1
Scale: 1:2



DETAIL Z1-1
Scale: 2:1



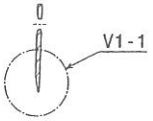
ISOMETRIC VIEW
NTS



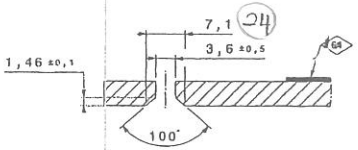
DETAIL W1-1
Scale: 1:2

REFERENCE ONLY

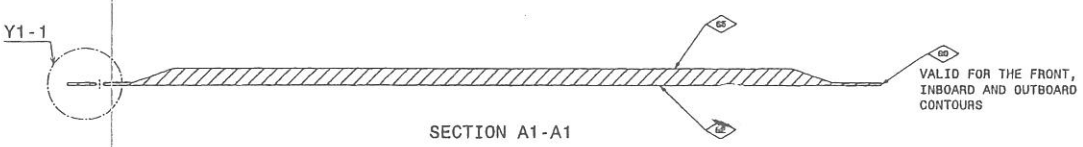
SECTION C1-C1
TYPICAL VIEW VALID FOR ALL COUNTERSUNK HOLES



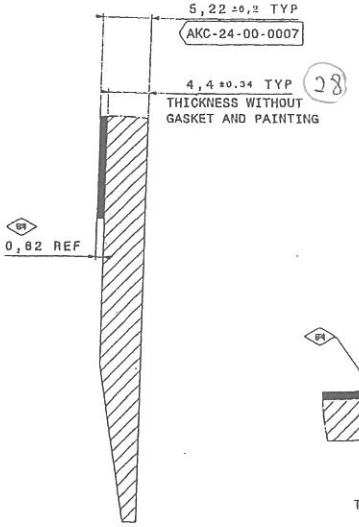
SECTION E1-E1
Scale: 1:2
TYPICAL VIEW FOR THE REAR CHAMFER



DETAIL U1-1
Scale: 3:1



SECTION A1-A1



DETAIL V1-1
Scale: 5:1
TYPICAL VIEW VALID FOR ALL EDGES

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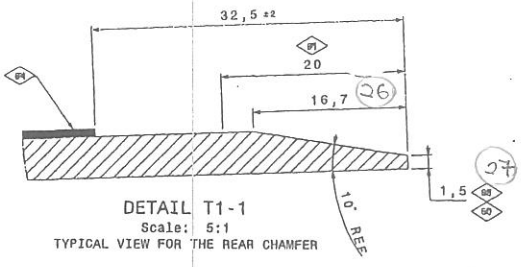
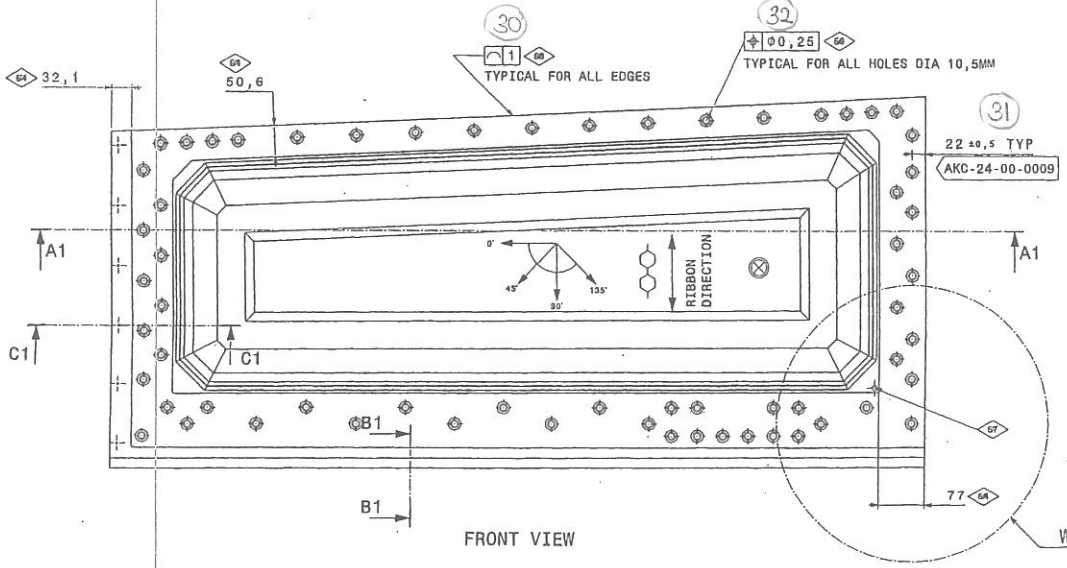
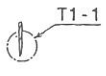


DETAIL T1-1
Scale: 5:1
TYPICAL VIEW FOR THE REAR CHAMFER



FRONT VIEW



SECTION B1-B1
Scale: 1:3

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COMPONENT OF AN ICY PART

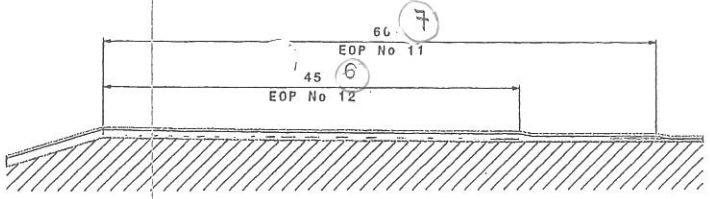
PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

INCHES 0 1 2 3 4
MILLIMETRES 0 10 20 30 40 50 60 70 80 90 100

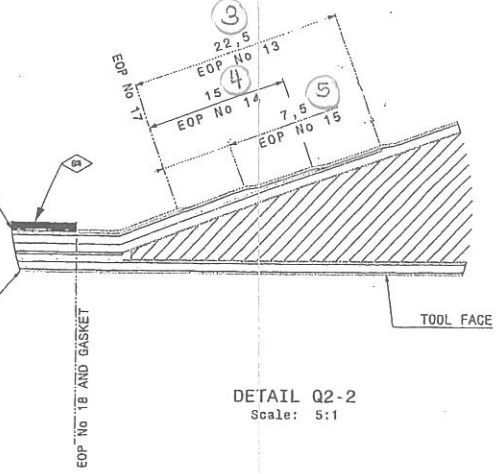
COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED A0D0001-6	SURFACE FINISH A0D0002 ✓	AIRBUS	
IDENTIFICATION MARKINGS A0D0003	INTERCHANGEABLE PART YES NO	SCALE 1:3	
DRW SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O. ORIGIN BE	APPD SEE ECN	MTS SEE ECN	PROCESS SEE ECN
TITLE BOTTOM PANEL 5	FIRST ANGLE PROJECTION	SIZE A0	
	V57467051 SHEET 01		A0D ISSUE



DETAIL R2-2
Scale: 5:1

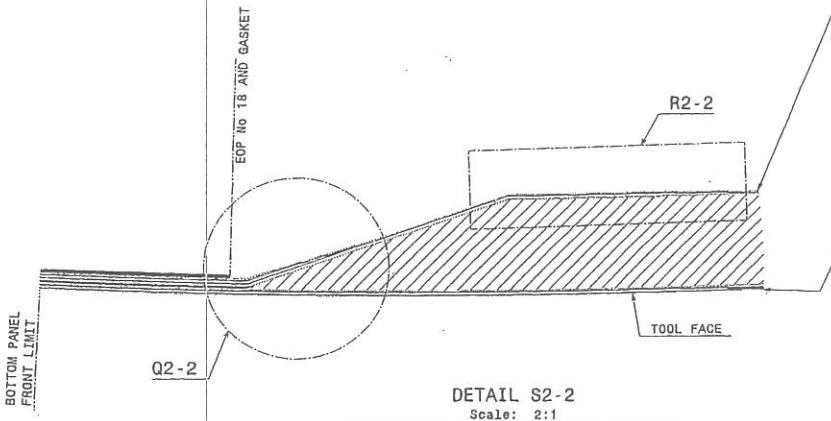
LAY-UP TABLE				
BOM	PLY No	MATERIAL	DIR	THK (mm)
595	17	GLASS FIBER	-	0,250
592	16	CARBON FIBER	0°/90°	0,280
592	15	CARBON FIBER	45°/135°	0,280
592	14	CARBON FIBER	45°/135°	0,280
592	13	CARBON FIBER	0°/90°	0,280
592	12	CARBON FIBER	45°/135°	0,280
592	11	CARBON FIBER	45°/135°	0,280
592	10	CARBON FIBER	0°/90°	0,280
592	9	CARBON FIBER	0°/90°	0,280
592	8	CARBON FIBER	45°/135°	0,280
592	7	CARBON FIBER	45°/135°	0,280
592	6	CARBON FIBER	0°/90°	0,280
592	5	CARBON FIBER	45°/135°	0,280
592	4	CARBON FIBER	45°/135°	0,280
592	3	CARBON FIBER	0°/90°	0,280
572	2	BRONZE MESH	-	0,060
590	1	SURFACING FILM	-	0,170
				4,400



DETAIL Q2-2
Scale: 5:1

REFERENCE ONLY

LAY-UP TABLE				
BOM	PLY No	MATERIAL	DIR	THK (mm)
591	18	TEDLAR	-	0,050
592	16	CARBON FIBER	0°/90°	0,280
592	10	CARBON FIBER	0°/90°	0,280
583	A1	ADHESIVE	-	0,100
580	A2	ADHESIVE	-	0,100
220	-	HONEYCOMB	-	25
580	A2	ADHESIVE	-	0,100
583	A1	ADHESIVE	-	0,100
592	6	CARBON FIBER	0°/90°	0,280
592	3	CARBON FIBER	0°/90°	0,280
572	2	BRONZE MESH	-	0,060
590	1	SURFACE FILM	-	0,170
				26,800



DETAIL S2-2
Scale: 2:1
TYPICAL VIEW VALID FOR ALL PANEL CONTOURS

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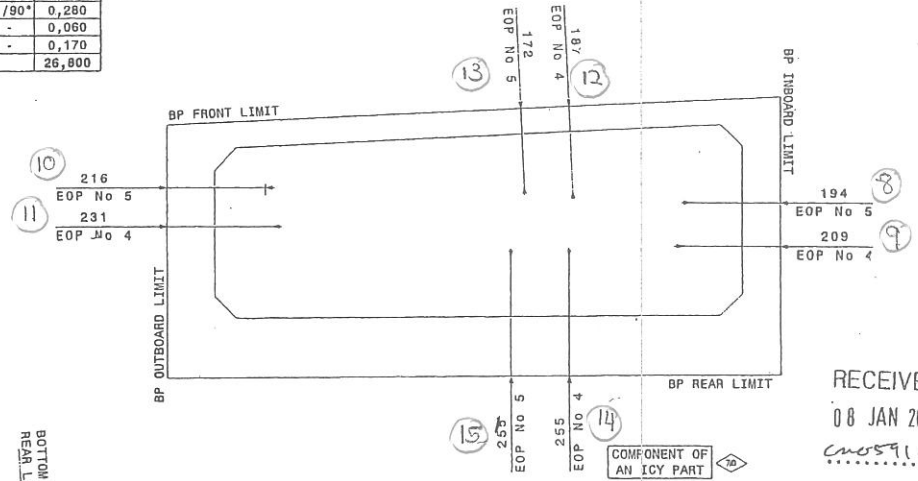
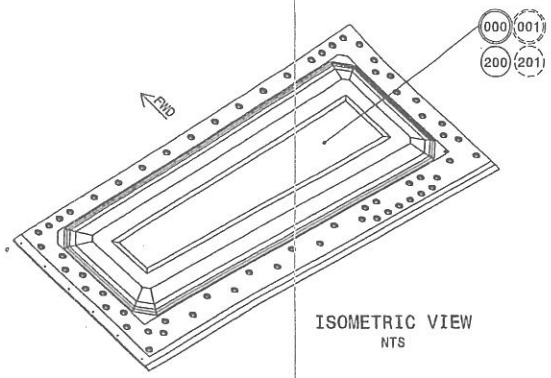
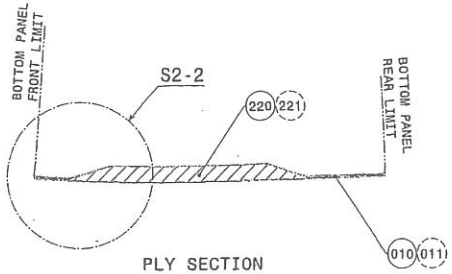


UPPER VIEW
Scale: 1:4
TYPICAL VIEW OF PLY LIMITS
UNDER HONEYCOMB



ISOMETRIC VIEW
NTS



PLY SECTION
CHORDWISE SECTION

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CM0591-13

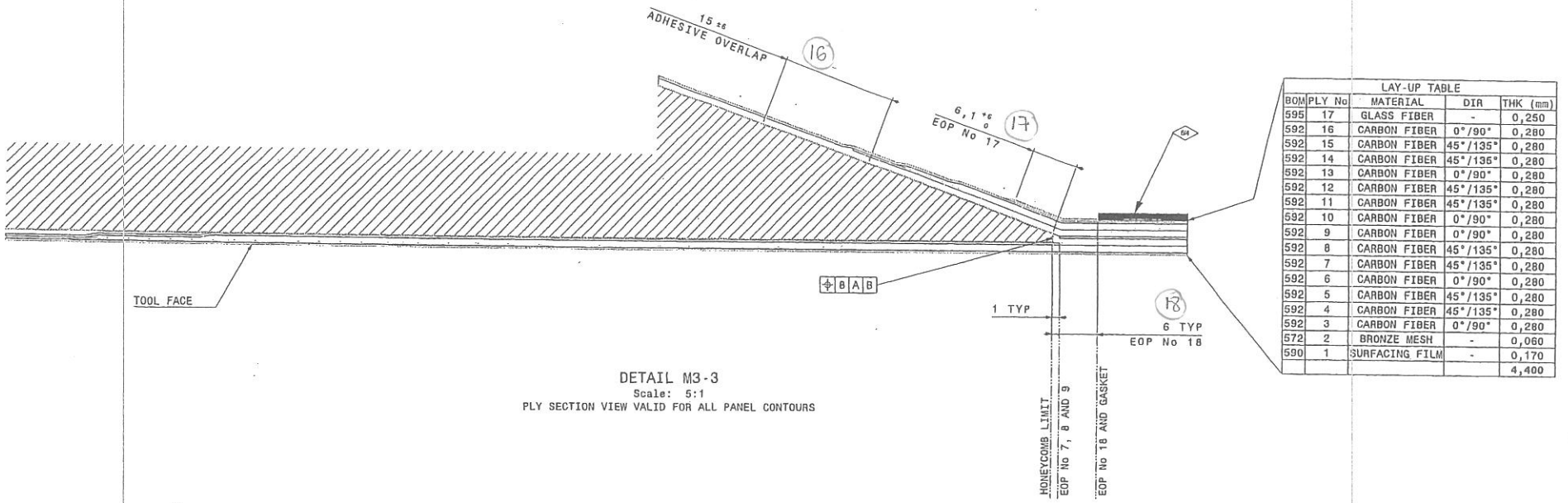
COMPONENT OF AN ICY PART 20

PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED A8D0001-B	SURFACE FINISH A8D0002	✓	AIRBUS
IDENTIFICATION MARKINGS A8D0003	INTERCHANGEABLE PART YES NO		SCALE 1:5
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O.ORIGIN BE	APPD SEE ECN	MTG SEE ECN	PROCESS SEE ECN
TITLE BOTTOM PANEL 5	FIRST ANGLE PROJECTION	SIZE A0	
	V57467051 SHEET 02		ISSUE A00

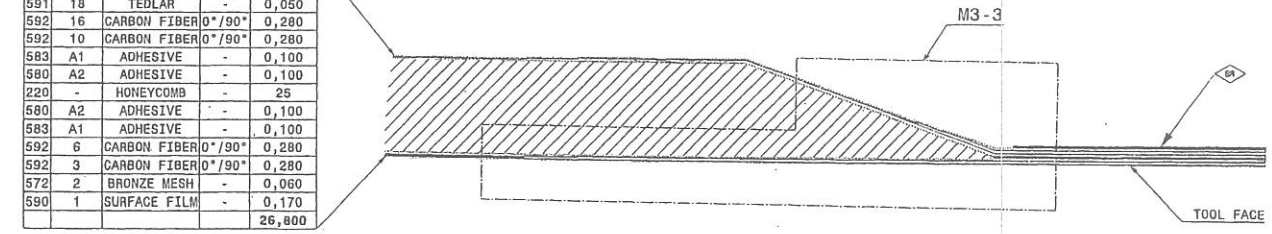


LAY-UP TABLE				
BOM	PLY No	MATERIAL	DIR	THK (mm)
595	17	GLASS FIBER	-	0,250
592	16	CARBON FIBER	0°/90°	0,280
592	15	CARBON FIBER	45°/135°	0,280
592	14	CARBON FIBER	45°/135°	0,280
592	13	CARBON FIBER	0°/90°	0,280
592	12	CARBON FIBER	45°/135°	0,280
592	11	CARBON FIBER	45°/135°	0,280
592	10	CARBON FIBER	0°/90°	0,280
592	9	CARBON FIBER	0°/90°	0,280
592	8	CARBON FIBER	45°/135°	0,280
592	7	CARBON FIBER	45°/135°	0,280
592	6	CARBON FIBER	0°/90°	0,280
592	5	CARBON FIBER	45°/135°	0,280
592	4	CARBON FIBER	45°/135°	0,280
592	3	CARBON FIBER	0°/90°	0,280
572	2	BRONZE MESH	-	0,060
590	1	SURFACING FILM	-	0,170
				4,400

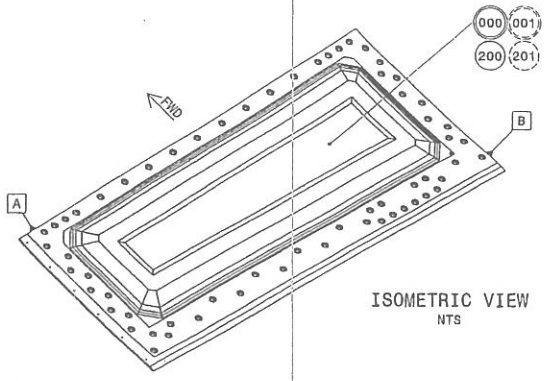
DETAIL M3-3
Scale: 5:1
PLY SECTION VIEW VALID FOR ALL PANEL CONTOURS

REFERENCE ONLY

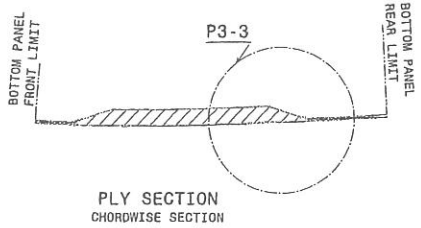
LAY-UP TABLE				
BOM	PLY No	MATERIAL	DIR	THK (mm)
591	18	TEDLAR	-	0,050
592	16	CARBON FIBER	0°/90°	0,280
592	10	CARBON FIBER	0°/90°	0,280
583	A1	ADHESIVE	-	0,100
580	A2	ADHESIVE	-	0,100
220	-	HONEYCOMB	-	25
580	A2	ADHESIVE	-	0,100
583	A1	ADHESIVE	-	0,100
592	6	CARBON FIBER	0°/90°	0,280
592	3	CARBON FIBER	0°/90°	0,280
572	2	BRONZE MESH	-	0,060
590	1	SURFACE FILM	-	0,170
				26,800



DETAIL P3-3
Scale: 2:1



ISOMETRIC VIEW
NTS



PLY SECTION
CHORDWISE SECTION

COMPONENT OF AN ICY PART 70

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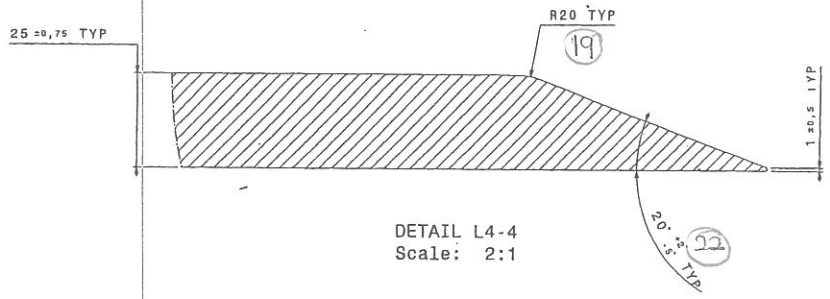
PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

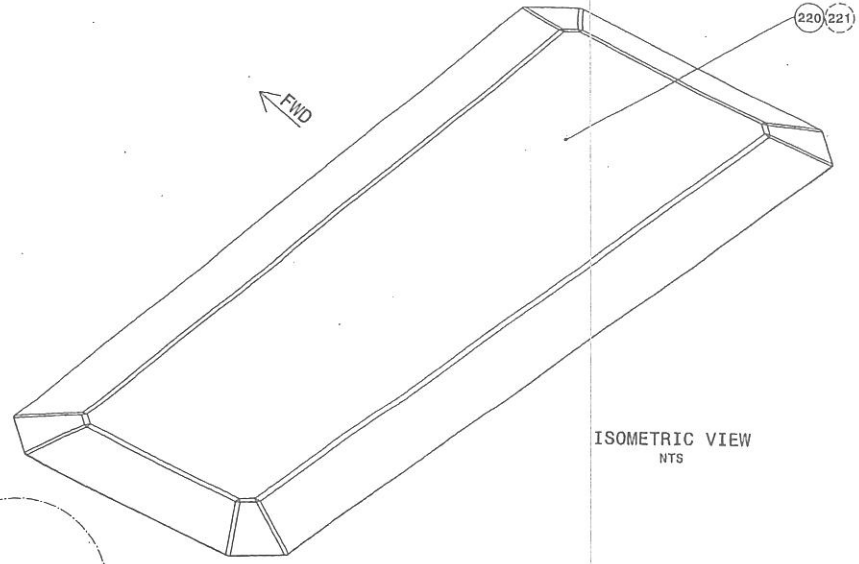
INCHES 0 1 2 3 4
MILLIMETRES 0 10 20 30 40 50 60 70 80 90 100

COMPUTER PRODUCED DRAWING USING CATIA V6. NO MANUAL ALTERATION

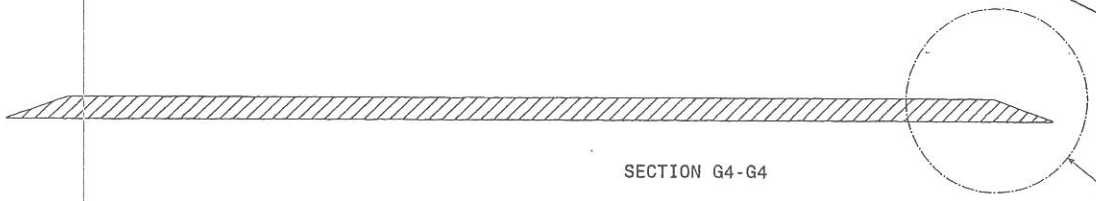
LIMITS NOT STATED A830001-8	SURFACE FINISH A808002 ✓	AIRBUS	
IDENTIFICATION MARKINGS A808003	INTERCHANGEABLE PART yes NO	SCALE 1:3	
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O.ORIGIN BE	APPD SEE ECN	WTS SEE ECN	PROCESS SEE ECN
TITLE BOTTOM PANEL 5	FIRST ANGLE PROJECTION	SIZE A0	V57467051 ASD ISSUE



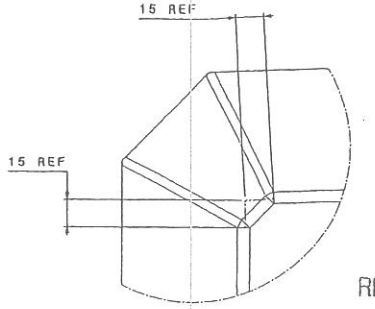
DETAIL L4-4
Scale: 2:1



ISOMETRIC VIEW
NTS



SECTION G4-G4



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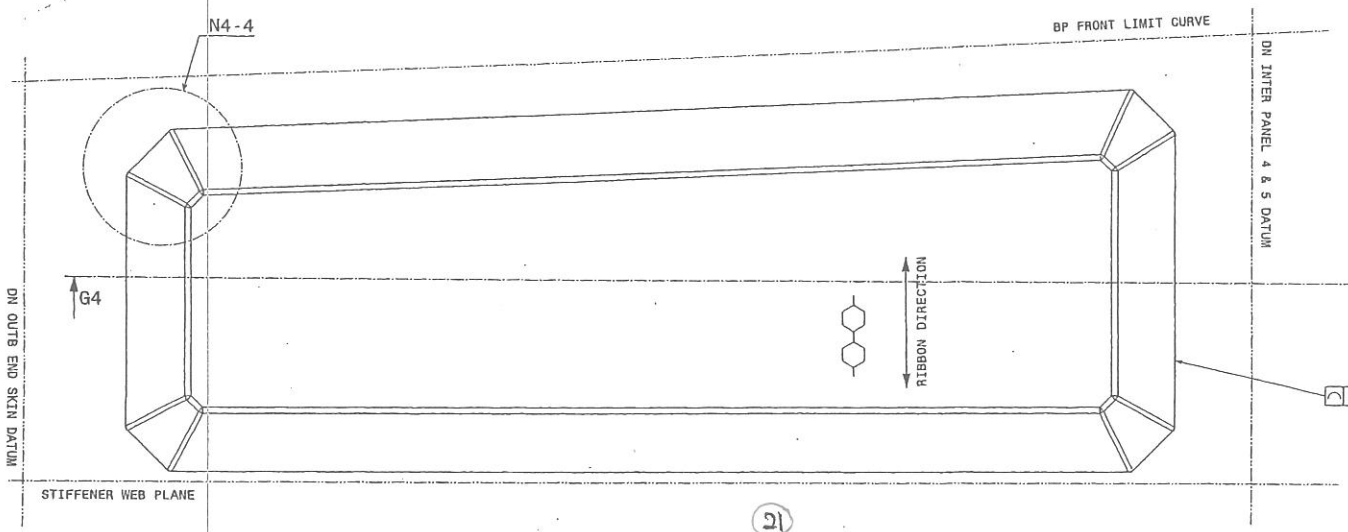
08 JAN 2014

DETAIL N4-4
Scale: 1:1
TYPICAL VIEW FOR ALL CHAMFER CORNERS



FRONT VIEW

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COMPONENT OF AN ICY PART 10

PICTURE SHEET REVISION : 002 (SGNACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED A0C0001-6	SURFACE FINISH A0C0002 ✓	AIRBUS	
IDENTIFICATION MARKINGS A0C0003	INTERCHANGEABLE PART YES NO	SCALE 1:2	
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O. ORIGIN BE	APPD SEE ECN	WTS SEE ECN	PROCESS SEE ECN
TITLE		FIRST ANGLE PROJECTION	SIZE A0
BOTTOM PANEL 5		V57467051	ADD
		SHEET 04	ISSUE

COMPOSITE ENGINEERING REQUIREMENTS SHEET

CONTROL PROCESS PLATE A [illegible]HE SAME TOOLING AND UNDER THE SAME VACUUM BAGGING OF BOTTOM PANEL WHEN PLATE B NOT USED (3).

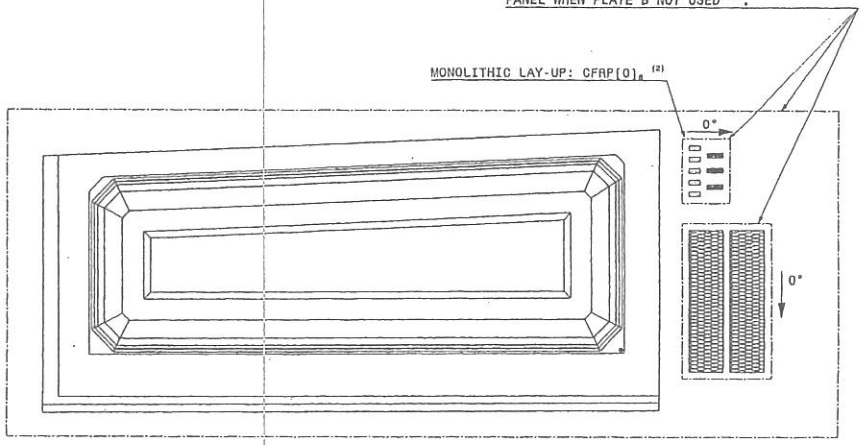


FIGURE 1: BOTTOM PANEL P01 AND CONTROL PROCESS SPECIMENS ON THE SAME TOOL (PLATE A)

ADDITIONAL CONTROL PROCESS PLATE B (PROCESSED [illegible]'ANEOUSLY WITH THE SERIAL PRODUCTION PARTS, USING THE SAME MA[illegible]. BATCHES AND CONNECTED IN SERIES ON THE SAME VACUUM LINE, THE TEST PANEL BEING THE FARTHEST FROM THE GAUGES) (1).

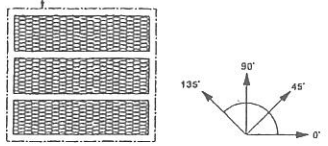
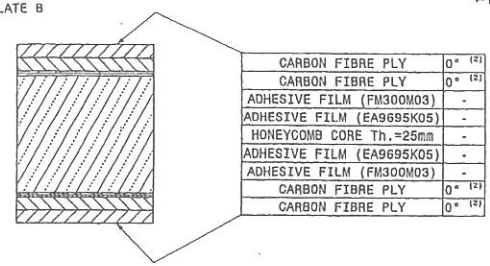
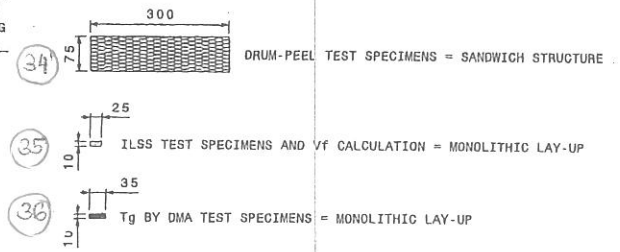


FIGURE 2: ADDITIONAL CONTROL PROCESS PLATE B



CARBON FIBRE PLY	0° (2)
CARBON FIBRE PLY	0° (2)
ADHESIVE FILM (FM300M03)	-
ADHESIVE FILM (EA9695K05)	-
HONEYCOMB CORE Th.=25mm	-
ADHESIVE FILM (EA9695K05)	-
ADHESIVE FILM (FM300M03)	-
CARBON FIBRE PLY	0° (2)
CARBON FIBRE PLY	0° (2)

FIGURE 3: DETAIL OF THE ADDITIONAL CONTROL PROCESS PLATE B



NOTES:

(1) THE SIMILAR THERMAL PROFILE REQUIRED FOR THE CONTROL PROCESS PLATE AND SERIAL PRODUCTION TOOL HAS BEEN DEMONSTRATED BY A HEAT SURVEY BEFORE THE START OF THE PRODUCTION.

(2) 0 DEG. IS ORIENTED ALONG THE SPECIMEN LENGTH.

(3) AT LEAST THREE SPECIMENS BY SAME VACUUM LINE IN THE AUTOCLAVE.

COMPOSITE STRUCTURE TECHNOLOGY	SANDWICH COMPOSITE	
COMPOSITE MANUFACTURING PROCESS	SANDWICH COMPOSITE ONE STEP CURING ("DUAL CURE") MATERIAL COMPATIBILITY PER 0/9600/12-026-0 TECHNICAL REPORT	
AIRBUS PROCESS SPECIFICATIONS - AIPS *(ENTER APPLICABLE SPECIFICATIONS AS REQUIRED FROM MPSL)*	LAY-UP AND CURING: AIPS 03-02-018 MACHINING: AIPS 03-07-002	
PART SPECIFIC MANUFACTURING PROCESSES	CMR SHALL BE WRITTEN BASED ON P.S. 6.7271-01 CMR V57466050000 / V57466050001 - ISSUE 2	
AIRBUS TEST METHOD REFERENCES *(DEFINE ADDITIONAL APPLICABLE SPECIFICATIONS AS REQUIRED)*	AITM 6-0011 AITM 6-0012 AITM 6-0013 AITM 6-3004 AITM 6-4002 AITM 6-4005 AITM 6-4010 AITM 6-4011 AITM 6-4014	
SURFACE QUALITY	ABD 0076	
PART WEIGHT TOLERANCE	± 3 %	
PART LAMINATE THICKNESS TOLERANCE	± 0,340 mm	
PART FIBRE / VOLUME TOLERANCES	± 4 %	
ACCEPTANCE CRITERIA	AITM 6-0011 CLASS IV	
FIRST PART QUALIFICATION (STRIKETHROUGH AS APPLICABLE)	~~YES~~	NO
WITNESS SPECIMENS REQUIRED *(STRIKETHROUGH AS APPLICABLE - DEFINE WITNESS SPECIMENS ON ADDITIONAL SHEET(S) AS REQUIRED)*	~~YES~~	NO

ADDITIONAL PART SPECIFIC REQUIREMENTS:	No.	DEFINITION	SPECIFICATION	REQUIREMENT	INSPECTION AREA/ DIMENSIONS	PRODUCTION PARTS: No. OF SPECIMENS
NON DESTRUCTIVE TESTS	1	VISUAL (1) INSPECTION	AITM 6.3004	AIPI 03-02-018	WHOLE SURFACES	ALL PARTS
	2	DIMENSIONAL CONTROL	-	SEE DRAWING	WHOLE PART	ALL PARTS
	3	THICKNESS MEASUREMENT	-	FIG 4	MONOLITHIC AREAS	ALL PARTS
	4	ULTRASONIC (1) INSPECTION	AITM 6-0011 CLASS IV	REFER TO ADDITIONAL SHEET	MONOLITHIC AREAS	ALL PARTS
					SANDWICH AREA	ALL PARTS
MECHANICAL (2) TESTS	6	ILSS	EN2563	AVERAGE VALUE > 70 MPa INDIV. VALUE > 60 MPa	CONTROL PROCESS PANEL 25 mm X 10 mm	5
	7	CLIMBING DRUM PEEL TEST	EN 2563-3	INDIV. VALUE > 3.25 N/mm AND COHESIVE FAILURE	ADDITIONAL CONTROL PROCESS PANEL 300 X75 mm see figure 5	3
PHYSICO CHEMICALS (2) TESTS	9	GLASS TRANSITION TEMPERATURE (Tg)	AITM 1-0003	AVERAGE ONSET VALUE > 190°(Tg-onset) AVERAGE LOSS VALUE>200°C (Tg-loss)	CONTROL PROCESS PANEL 35 mm X 10 mm	3
	10	Vf	THICKNESS MEASUREMENT	AVERAGE AND INDIV VALUES 52-60%	-	5 (ILSS SPEC.)

(1) NDT INSPECTION SHALL BE PERFORMED AFTER TRIMMING , DRILLING .

(2): No pre-conditioning are required for these tests. Test specimens shall be tested "as received": they have to be wrapped in a plastic bag with dessicant immediately after trimming. Test specimens shall be placed into a dessicator when they arrived at the testing Laboratory and stay in until testing. They have to be tested immediately after dessicator removal, within 1 week after panel manufacturing.

MATERIAL		MATERIAL SPECIFICATION	
TYPE	DESIGNATION	SPECIFICATION	IPS REGISTRATION
PREPEG CFRP PREPEG GFRP	8552S/37%/AGP280/C 8552/37%/7781	ABS5003B000-03 ABS5009F40EP250	IPS 05-01-004-03 IPS 05-02-003-03
ADHESIVE 1 ADHESIVE 2 (DUAL CURE)	EA9695K05 FM300M03	ABS5320BK01 ABS5320AM02	IPS 10-01-006-01 IPS 10-01-006-02
SURFACING FILM	SURFACE MASTER, SM905	ABS5245B220-06	IPS 10-06-001-06
DRY FABRICS (METALLIC)	8552/CuSn6 RC38	ABS5317AA2-02	IPS 05-12-001-02
CORE MATERIAL	N-636 PLYAMIDE PAPER	ABS5341C1-250	IPS 11-01-004-01 (P)
SPECIFIC TEDLAR	TGH158L3	DAN95M	NO AIRBUS SPECIFICATION

REFERENCE ONLY

CTRM AC
MASTER COPY
ORIGINAL COPY WHEN IN RED INK STAMP

RECEIVED
08 JAN 2014
CMOS91-13

COMPONENT OF AN ICY PART: NO

PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED ABD0001-6	SURFACE FINISH ABD0002	✓	AIRBUS	
IDENTIFICATION MARKINGS ABD0103	INTERCHANGEABLE PART YES / NO DRAWING NO.		SCALE 1:1	
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN	
D.O. ORIGIN BE	APPD SEE ECN	MTS SEE ECN	PROCESS SEE ECN	
TITLE	FIRST ANGLE PROJECTION	SIZE A0		
BOTTOM PANEL 5	V57467051	SHEET 05	ISSUE ADD	

COMPOSITE ENGINEERING REQUIREMENTS SHEET

WITNESS SPECIMENS	
(TEST TYPE)	X
NUMBER OF SPECIMENS	XX
PERFORMANCE CRITERIA	XX
(TEST TYPE)	X
NUMBER OF SPECIMENS	XX
PERFORMANCE CRITERIA	XX
(TEST TYPE)	X
NUMBER OF SPECIMENS	XX
PERFORMANCE CRITERIA	XX
(TEST TYPE)	X
NUMBER OF SPECIMENS	XX
PERFORMANCE CRITERIA	XX
(TEST TYPE)	X
NUMBER OF SPECIMENS	XX
PERFORMANCE CRITERIA	XX

WITNESS SPECIMEN DEFINITION

ITNESS SPECIMEN DEFINITION(S)

(WHERE WITNESS SPECIMENS ARE BEING TAKEN FROM CUT-OUT AREAS INCLUDE SKETCH WITH IDENTIFYING LOCATION OTHERWISE WITNESS SPECIMENS TO BE LOCATED AT DISCRETION OF MANUFACTRURING)

COMPONENT OF AN ICY PART: NO

PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

INCHES 0 1 2 3 4
MILLIMETRES 0 10 20 30 40 50 60 70 80 90 100

LIMITS NOT STATED A800001-6	SURFACE FINISH A800002 ✓		AIRBUS
IDENTIFICATION MARKINGS A800003	INTERCHANGEABLE PART YES / NO		SCALE 1:1
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN	SYSTEM SEE ECN
D.O.ORIGIN BE	APPD SEE ECN	WTS SEE ECN	PROCESS SEE ECN
TITLE	FIRST ANGLE PROJECTION	SIZE A0	
BOTTOM PANEL 5	V57467051 SHEET 06		ISSUE A00

COMPOSITE ENGINEERING REQUIREMENTS SHEET

THICKNESS REQUIREMENTS

- MONOLITHIC AREA: THICKNESS MEASUREMENT REQUIRED FOR ALL SERIAL PRODUCTION PARTS.
- MONOLITHIC AREA: THICKNESS MEASUREMENT ONLY REQUIRED ON FIRST TEN AIRCRAFTS (COULD BE CUT OUT AFTER TEN PARTS WITH RESULTS COMPLIANT WITH THE REQUIREMENTS ON DECISION OF SONACA QUALITY ENGINEERING).

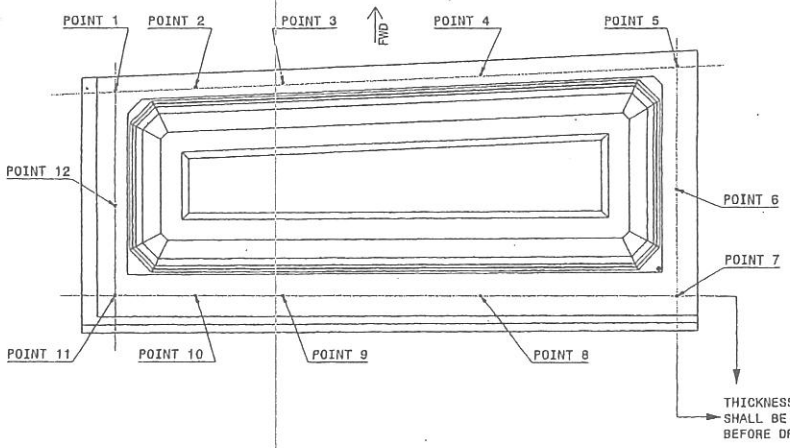
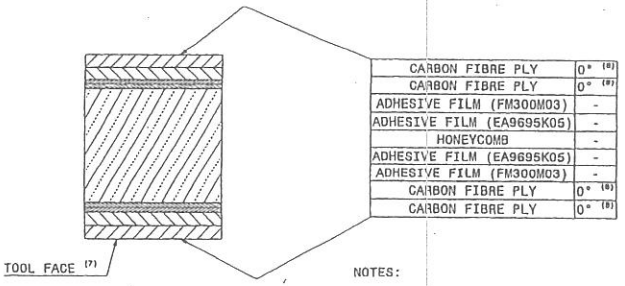


FIGURE 4: THICKNESS MEASUREMENT LOCATIONS

POINT	TYPE OF AREA	THICKNESS REQUIREMENT (mm)	
		MINIMUM	MAXIMUM
1	MONOLITHIC	4,06	4,74
2	MONOLITHIC	4,06	4,74
3	MONOLITHIC	4,06	4,74
4	MONOLITHIC	4,06	4,74
5	MONOLITHIC	4,06	4,74
6	MONOLITHIC	4,06	4,74
7	MONOLITHIC	4,06	4,74
8	MONOLITHIC	4,06	4,74
9	MONOLITHIC	4,06	4,74
10	MONOLITHIC	4,06	4,74
11	MONOLITHIC	4,06	4,74
12	MONOLITHIC	4,06	4,74
FOR INFORMATION ONLY	SANDWICH	24,27	28,49

ADDITIONAL PANEL DEFINITION FOR CLIMBING DRUM PEEL SPECIMEN PREPARATION



NOTES:

(7) SIDE TO PEEL = TOOL FACE
(8) 0 DEG. IS ORIENTED ALONG SPECIMEN LENGTH

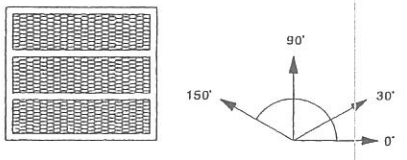


FIGURE 5: CLIMBING DRUM PEEL TEST SPECIMEN DEFINITION

33

NDT REQUIREMENTS (1)

TYPE OF AREA (1)		POROSITY			DELAMINATION-VOIDS-INCLUSIONS		METHOD
		ACCEPTABLE ATTENUATION (dB)	THROUGH THICKNESS	ACCUMULATED POROSITY IN THE WHOLE SURFACE	INDIVIDUAL DEFECT	ACCUMULATED DEFECTS	
MONOLITHIC		12 (PE)	< 2,5%	TOTAL DEFECT SURFACE SHALL BE LESS THAN 2% OF THE WHOLE SURFACE (TOTAL MONOLITHIC + HC FACING SURFACES)	- (3) (TT)	FLAT OR SLIGHTY CURVED SURFACE AND RADII: CLASS IV WITH RESPECT TO AITM 6-0011 (2)	ULTRASONIC INSPECTION: - AITM 6-4002-TT - AITM 6-4005-PE
SANDWICH (4)	HC FACING: UP SIDE	6 (PE)	< 20% IN LENGTH BY PROJECTED AREA		12dB (TT)		
	HC FACING: DOWN SIDE						
	HONEYCOMB CORE	N/A	N/A	N/A	12dB (TT)		

(1) NDT INSPECTION SHALL BE PERFORMED AFTER TRIMMING AND DRILLING .
(2) THE TOTAL SURFACE OF THE PART SHALL BE CONSIDERED AS THE SUM OF THE THREE SURFACES:
- SURFACE 1 = MONOLITHIC AREA;
- SURFACE 2 = TOP HONEYCOMB FACING SURFACE;
- SURFACE 3 = BOTTOM HONEYCOMB FACING SURFACE.

(3) ALL LAMINATE INDICATIONS THAT CANNOT BE ATTRIBUATED TO GEOMETRIC FEATURES OR OTHER SURFACE CONDITIONS SHALL BE EVALUATED WITH THE PULSE-ECHO TECHNIQUE IN ACCORDANCE WITH THE REQUIREMENTS OF AITM6-4005
(4) PLY DROP-OFF AREAS NOT SUBMITTED TO INSPECTION FOR POROSITY ANALYSIS

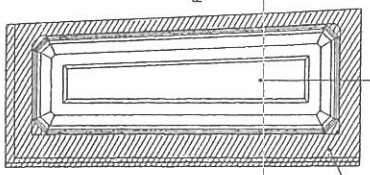


FIGURE 6: MAPPING OF THE BOTTOM PANEL NON-DESTRUCTIVE INSPECTION

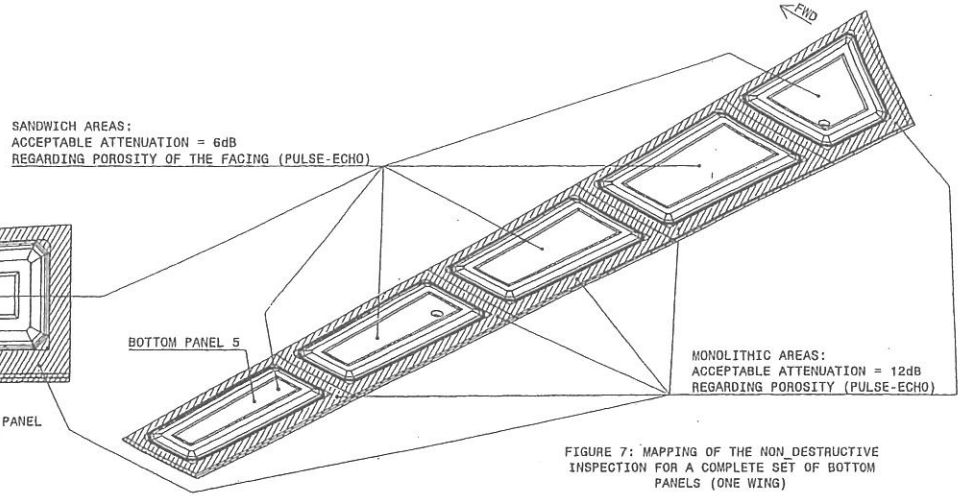


FIGURE 7: MAPPING OF THE NON_DESTRUCTIVE INSPECTION FOR A COMPLETE SET OF BOTTOM PANELS (ONE WING)

COMPONENT OF AN IGY PART NO

PICTURE SHEET REVISION : 002 (SONACA USE ONLY)

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

COMPUTER PRODUCED DRAWING USING CATIA V5. NO MANUAL ALTERATION

LIMITS NOT STATED A1000001-B	SURFACE FINISH A1000002	AIRBUS
IDENTIFICATION MARKINGS A1000103	INTERCHANGEABLE PART YES NO DRAWING NO.	SCALE 1:1
DRN SEE ECN	CHKD SEE ECN	STRESS SEE ECN
D.O.ORIGIN BE	APPD SEE ECN	MFG SEE ECN
		SYSTEM SEE ECN
		PROCESS SEE ECN
TITLE BOTTOM PANEL 5	FIRST ANGLE PROJECTION	SIZE A0
	V57467051 SHEET 57	ADD ISSUE

Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

1. Part Number				2. Part Name			3. Serial Number	4. FAI Report
V57467051 000 00				D. NOSE PANEL 5 - LH			0027	CTRMAC-FAI/SONACA/DN-127
Characteristic Accountability				Inspection / Test Results			Optional Fields	
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. REMARKS	
1		Curing	CMR ISSUE 3	ACCEPT	CMR ISSUE 3	N/A	CURING GRAPH	
1	Lay Up Table	Ply orientation	As per drawing	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to Lay up inspection report Reg No. Form 400C-F	
2	Lay Up Table	Ply orientation	As per drawing	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to Lay up inspection report Reg No. Form 400C-F	
3	EOP No13	Ply drop off	22.5mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
4	EOP No 14	Ply drop off	15mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
5	EOP No 15	Ply drop off	7.5mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
6	EOP No 12	Ply drop off	45mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
7	EOP No 11	Ply drop off	60mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
8	EOP No 5 FRONT	Ply drop off	172mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
9	EOP No 4 FRONT	Ply drop off	187mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By : IZZATE BINTI KHASBULLAH

13. Date : 03 SEPTEMBER 2014

1. Part Number				2. Part Name			3. Serial Number	4. FAI Report
V57467051 000 00				D. NOSE PANEL 5 - LH			0027	CTRMAC-FAI/SONACA/DN-127
Characteristic Accountability				Inspection / Test Results			Optional Fields	
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. REMARKS	
10	EOP No 5 INBOARD	Ply drop off	194mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
11	EOP No 4 INBOARD	Ply drop off	209mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
12	EOP No 4 REAR	Ply drop off	255mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
13	EOP No 5 REAR	Ply drop off	240mm	ACCEPT	62-000247-00-01-D293-V57466050000 (LH)	N/A	Refer to lay up inspection report form Reg No. 103D-F	
14	EOP No 4 OUTBOARD	Ply drop off	531mm	ACCEPT	62 - 000260 - 00 - 01 - D 453 - V574 67051 000	N/A	Refer to lay up inspection report form Reg No. 103D-F	
15	EOP No 5 OUTBOARD	Ply drop off	516mm	ACCEPT	62 - 000260 - 00 - 01 - D 453 - V574 67051 000	N/A	Refer to lay up inspection report form Reg No. 103D-F	
16	Sheet 03 P11	Adhesive overlap	15mm ± 6	ACCEPT	62 - 000260 - 00 - 01 - D 453 - V574 67051 000	N/A	Refer to lay up inspection report form Reg No. 103D-F	
17	EOP No 17	Ply drop off	6.1mm (+ 6 – 0)	ACCEPT	62 - 000260 - 00 - 01 - D 453 - V574 67051 000	N/A	Refer to lay up inspection report form Reg No. 103D-F	
18	EOP No 18	Tedlar	6mm TYP	ACCEPT	62 - 000260 - 00 - 01 - D 453 - V574 67051 000	N/A	Refer to lay up inspection report form Reg No. 103D-F	
19	Sheet 04 Q16	Core Radius	R20 TYP	ACCEPT	N/A	N/A	Refer to CORE inspection report form Reg No. 103D-F	

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By : IZZATE BINTI KHASBULLAH

13. Date : 03 SEPTEMBER 2014

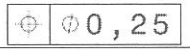
1. Part Number				2. Part Name			3. Serial Number	4. FAI Report
V57467051 000 00				D. NOSE PANEL 5 - LH			0027	CTRMAC-FAI/SONACA/DN-127
Characteristic Accountability				Inspection / Test Results			Optional Fields	
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. REMARKS	
20	Sheet 04 Front View	Dimension EOP	± 0.3 mm	ACCEPT	Loft References: CM-059Loft CATIA References No: CDD-ECC-13-0972	N/A	Refer to CORE inspection report form Reg No. 103D-F	
21	Sheet 04 Q14	Nose Tip Height	1 mm ± 0.5	ACCEPT	N/A	N/A	Refer to CORE inspection report form Reg No. 103D-F	
22	Sheet 04 P15	Chamfer Angle	20° $+2^{\circ}$ -5°	ACCEPT	N/A	N/A	Refer to CORE inspection report form Reg No. 103D-F	
23	Sheet 01, R18	Hole diameter	10.5mm (+0.05 – 0)	ACCEPT	N/A	N/A	Refer to CNC report form Reg No. 103D-F	
24	Sheet 01, L02	Hole diameter	3.6mm ± 0.5	ACCEPT	N/A	N/A	Refer to CNC report form Reg No. 103D-F	
25	Sheet 01, R09	Hole diameter	Do not fill drain hole 8.5mm ± 0.5	ACCEPT	N/A	N/A	Refer to CNC report form Reg No. 103D-F	
26	Sheet 01, G02	Width chamfer	16.7mm ± 0.8	ACCEPT	N/A	N/A	Refer to CNC report form Reg No. 103D-F	
27	Sheet 01, F01	Thickness Chamfer	1.5mm ± 0.5	ACCEPT	N/A	N/A	Refer to CNC report form Reg No. 103D-F	
28	Sheet 01, J06	Panel Thickness	4.4mm ± 0.34TYP Thickness without gasket and painting	MIN : 4.07mm MAX : 4.21mm	N/A	N/A	Dimensional Report form Reg No. 103D-F	
29	Sheet 01, Q16	Surface Profile	Refer to 3D model for reference MKC and AKC definition per AP2684 and CQS20.1.1 ⌓ 0 , 8 MKC-24-00-1014	Non-Conformance	CMM ID: CTRMAC 000032	E-11897	Refer to CMM Report (CAC/CMM/14-1183) Concession Report No: 201403338 Customer NCR No: SA-004605256 Result: Acceptable as it	

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By : IZZATE BINTI KHASBULLAH

13. Date : 03 SEPTEMBER 2014

Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

1. Part Number				2. Part Name			3. Serial Number	4. FAI Report
V57467051 000 00				D. NOSE PANEL 5 - LH			0027	CTRMAC-FAI/SONACA/DN-127
Characteristic Accountability				Inspection / Test Results			Optional Fields	
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed Tooling	11. Non-Conformance Number	14. REMARKS	
30	Sheet 01, G17	EOP	Refer to the 3D model for reference 	ACCEPT	N/A	N/A	Refer to CMM Report (CAC/CMM/14-1183)	
31	Sheet 01, F11	Hole position	MKC and AKC definition per AP2684 and CQS20.1.1 22mm ± 0.5 TYP AKC-24-00-0052	ACCEPT	N/A	N/A	Refer to CMM Report (CAC/CMM/14-1183)	
32	Sheet 01, G14	Hole position	Tolerance to be respected after sleeve installation is dia 0.3mm 	ACCEPT	N/A	N/A	Refer to CMM Report (CAC/CMM/14-1183)	
33	Sheet 07, CER	CTRMAC SONACA TECH 0004	CTRMAC SONACA TECH 0004	ACCEPT	CTRMAC SONACA TECH 0004	N/A	Refer to NDT report (ACT-SON-DN-FAI-033)	
34	Sheet 05, CER	Drum peel specimens	300 x 75mm	ACCEPT	N/A	N/A	Refer to test specimen report	
35	Sheet 05, CER	ILSS Test specimen	25 x 10mm	ACCEPT	N/A	N/A	Refer to test specimen report	
36	Sheet 05, CER	Tg specimens	35 x 10mm	ACCEPT	N/A	N/A	Refer to test specimen report	

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By : IZZATE BINTI KHASBULLAH

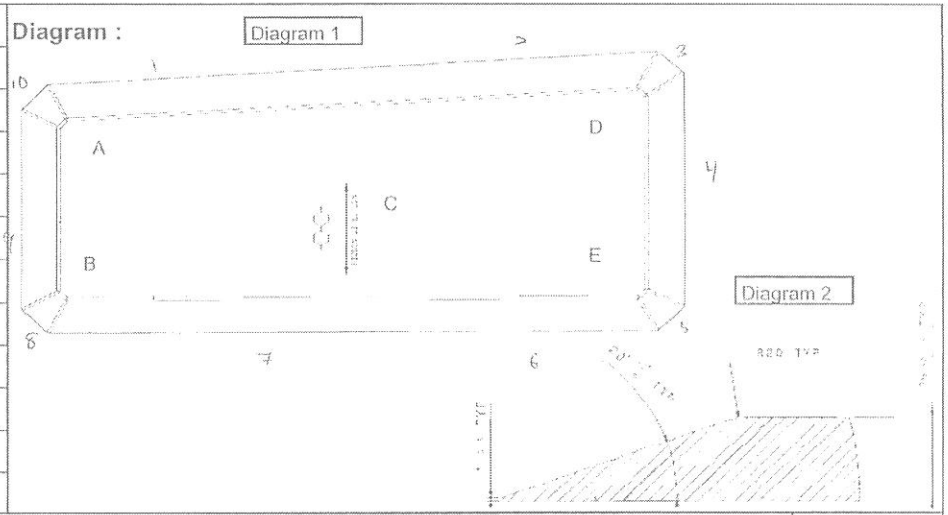
13. Date : 03 SEPTEMBER 2014

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350		
Part name	BOTTOM PANEL 5 LH		
Part number	V 754 6605 222 000	Qty	1
G.R # / Work Order Router	GR 13505 - 0100 - OP 0175		
Process area	Core Processing		
Vendor / Customer name	N/A		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	JD : 451 0381		
Inspected by	HAZIM	Issue	
Drawing number	V5746 7051	a) Drawing sheet: A-2	
Weight	N/A	b) Revision: -A-2	
Job Order No.			

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection											Accept / Reject
				1	2	3	4	5	6	7	8	9	10		
1)	Chamfer Angle	Diagram 1 & 2	20° +2°,-5°	20°	18°	19°	19°	20°	17°	19°	17°	18°	20°		A
2)	Nose Tip Height	Diagram 1 & 2	1 ±0.5mm	0.6mm	0.6mm	0.8mm	0.9mm	0.6mm	0.5mm	0.7mm	0.6mm	0.5mm	0.8mm		A
3)	Radius	Diagram 2	20R	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm	20mm		A
4)	Dimension EOP	Diagram 1	+/-3.0mm	0mm	0mm	0mm	0mm	0mm	0mm	0mm	0mm	0mm	0mm		A
5)	Visual	Diagram 1	Ribbon/Physical condition												A
6)	Thickness	Diagram 1 & 2	25mm ±0.75mm	A	B	C	D	E							
				25.0mm	25.0mm	25.0mm	24.89mm	24.99mm							A

QC Comments : DENSITY :

04/01/14

QC stamp & date

Overall Results : PASS (PASS / FAIL)

CTRM Aero-Composites

LAY UP INSPECTION REPORT

Project name	A350 XWB DROOP NOSE	Work Order Router	A350 - 0203 - 0027
Part name	BOTTOM PANEL SUT	Serial number	0027
Part number	~~A35~~ V5746 7051 000 00	Drawing number	V5746 7051
Inspected by AC 132 INSP 31/01/14 21599		Drawing Issue/revision	-A-2
		Report number:	

No	Ply No.	Engineering Sequence No.	Material	Requirement Ply orientation	Result	Requirement Warp condition	Result	Requirement Shape	Result	Requirement Ply Positioning	Result	Requirement Ply Condition: Butt Joint Ply	Over Lap Ply	Ply Wrinkle	Result	Status: Pass	Fail	Remark
1	1	1	Surfacing Film	Not Applicable	✓	Not Applicable	✓	Full Ply				–	–					
2	2	2	Bronze Mesh	Not Applicable	✓	Not Applicable	✓	Full Ply				–	–					
3	3	3	Carbon Woven	0	✓	Warp Up	✓	Full Ply				OK	20					Compaction
4	4	4	Carbon Woven	45	✓	Warp Up	✓	Window Ply				OK	22					
5	5	5	Carbon Woven	135	✓	Warp Up	✓	Window Ply				OK	20					
6	6	6	Carbon Woven	90	✓	Warp Up	✓	Full Ply				OK	21					Compaction
7	Ply A2	7	Adhesive Film EA9695.05K															
8	Ply A2	8	Adhesive Film EA9695.05K															
9	Ply A1	9	Adhesive Film FM300M03															
10	Ply A1	10	Adhesive Film FM300M04															Compaction
11	7	11	Carbon Woven	45	✓	Warp Up	✓	Window Ply				OK	21					
12	8	12	Carbon Woven	135	✓	Warp Up	✓	Window Ply				OK	21					
13	9	13	Carbon Woven	0	✓	Warp Up	✓	Window Ply				OK	20					
14	10	14	Carbon Woven	90	✓	Warp Up	✓	Full Ply				OK	20					
15	11	15	Carbon Woven	135	✓	Warp Up	✓	Window Ply				OK	19					Compaction
16	12	16	Carbon Woven	45	✓	Warp Up	✓	Window Ply				OK	19					
17	13	17	Carbon Woven	0	✓	Warp Up	✓	Window Ply				OK	20					
18	14	18	Carbon Woven	135	✓	Warp Up	✓	Window Ply				OK	20					
19	15	19	Carbon Woven	45	✓	Warp Up	✓	Window Ply				OK	21					
20	16	20	Carbon Woven	0	✓	Warp Up	✓	Full Ply				OK	21	AC 132 INSP 31/01/14 21599				
21	17	21	GFRP	Not Applicable	✓	Not Applicable	✓	Full Ply				~~OK~~ OK	2~~1~~					
22	18	-	Tedlar	Not Applicable	✓	Not Applicable	✓	Not Applicable				–	–					Final Bagging

No	Equipment used	Register no.

Customer Requirement Reference	Criteria	Customer Specification
1) AIPI 03-02-018		
2) AIPI 03-02-019		
3)		
4)		
5)		

Overall result: Pass / Fail

NCR number: N/A

Inspector stamp: AC 132 INSP

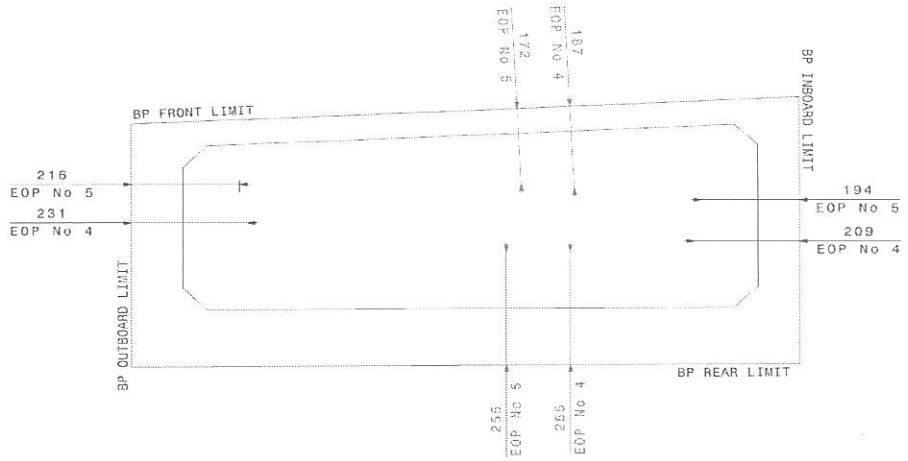
Date: 31/01/14

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB DROOP NOSE SONACA		
Part name	BOTTOM PANEL SLH		
Part number	V57467051 000 00	Qty	1
G.R # / Work Order Router	~~WB~~ 50S - 0203 - ~~0029~~ 0027		
Process area	LAY-UP (CCA)		
Vendor / Customer name	SONACA		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	EIE 21/01/14 3569 ~~0029~~ 0027		
Inspected by AC 132 INSP	Juliana	Issue	
Drawing number		a) Drawing sheet: A00	
		b) Revision: - A.2	

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection 1	2	3	4	5							Accept / Reject
1	PLY DROP-OFF BEFORE CORE	EOP No 4													
		REAR	275 ± 2 mm	275	275	274	274	275							Accept
		INBOARD	229 ± 2 mm	230	230	230	230	228							Accept
		FRONT	207 ± 2 mm	207	207	207	202	207							Accept
		OUTBOARD	251 ± 2 mm	250	252	250	~~250~~ 250	251							Accept
2		EOP No 5													
		REAR	260 ± 2 mm	260	~~260~~ 260	~~260~~ 260	261	~~260~~ 260							Accept
		INBOARD	214 ± 2 mm	215	215	~~215~~ 215	~~215~~ 215	214							Accept
		FRONT	192 ± 2 mm	190	192	192	191	192							Accept
		OUTBOARD	236 ± 2 mm	236	236	235	235	235							Accept

QC Comments : Measurement using Ruler ID CTRMAC:

standard / requirement spec = drawing spec + excess 20mm

Overall Results : PASS (PASS / ~~FAIL~~)

AC 132 INSP

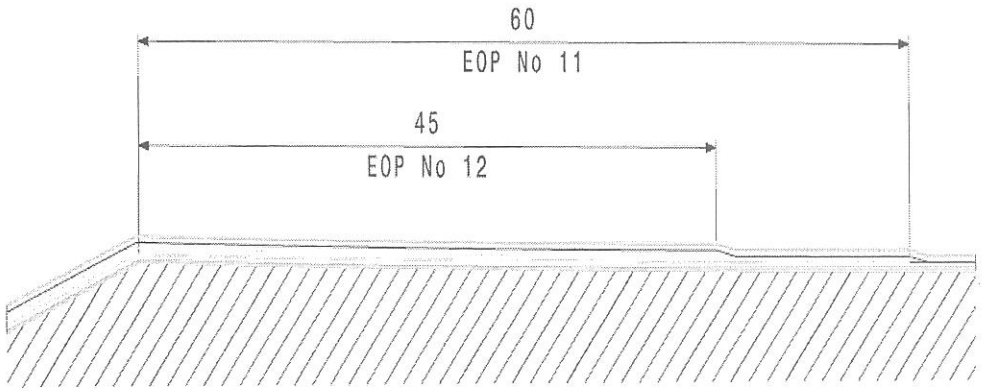
QC stamp & date

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB DROOP NOSE SONACA		
Part name	BOTTOM PANEL SLH		
Part number	V57467051 000 00	Qty	1
G.R # / Work Order Router	A350S - 0203 - 0027		
Process area	LAY-UP (CCA)		
Vendor / Customer name	SONACA		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	0027		
Inspected by	Juliang	Issue	
Drawing number	V57467051	a) Drawing sheet: A00	
		b) Revision: - A.2	

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection 1	2	3	4	5							Accept / Reject
		EOP No 11													
		REAR	60 ± 2 mm	60	60	60	60	61							Accept
		INBOARD	60 ± 2 mm	60	60	60	61	60							Accept
		FRONT	60 ± 2 mm	60	60	61	61	60							Accept
1	PLY DROP-OFF BEFORE CORE	OUTBOARD	60 ± 2 mm	60	60	60	60	61							Accept
		EOP No 12													
		REAR	45 ± 2 mm	45	46	45	45	45							Accept
		INBOARD	45 ± 2 mm	45	45	45	45	46							Accept
		FRONT	45 ± 2 mm	46	46	45	45	45							Accept
2		OUTBOARD	45 ± 2 mm	45	45	45	45	44							Accept

QC Comments : Measurement using Ruler ID CTRMAC:

AC 132 INSP

QC stamp & date

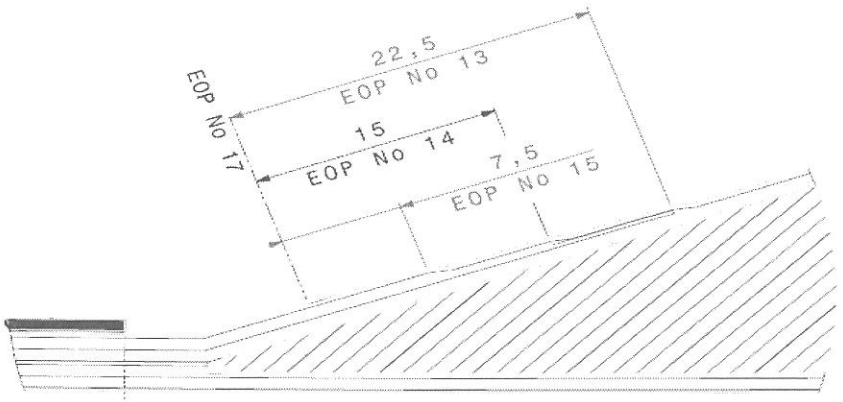
Overall Results : PASS (PASS / FAIL)

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB DROOP NOSE SONACA		
Part name	BOTTOM PANEL 541		
Part number	V5746705i 000 00	Qty	1
G.R # / Work Order Router	A350S - 0203 - ~~0027~~ 0027		
Process area	LAY-UP (CCA) EIE 21599 31/01/14 AC 132 INSP		
Vendor / Customer name	SONACA		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	0027		
Inspected by	Juliana	Issue	
Drawing number	V5746705i	a) Drawing sheet: A00	
		b) Revision: - A.2	

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection 1	2	3	4	5							Accept / Reject
	PLY DROP-OFF AFTER CORE	EOP No 13													
		REAR	28.5 ± 2 mm	29	29	28	29	28							Accept
		INBOARD	28.5 ± 2 mm	29	28	30	28	29							Accept
		OUTBOARD	28.5 ± 2 mm	29	28	28	30	28							Accept
1		FRONT	28.5 ± 2 mm	28	29	28	28	29							Accept
		EOP No 14													
		REAR	21.0 ± 2 mm	20	21	20	20	20							Accept
		INBOARD	21.0 ± 2 mm	21	21	21	21	21							Accept
		OUTBOARD	21.0 ± 2 mm	21	21	21	22	21							Accept
2		FRONT	21.0 ± 2 mm	22	21	21	21	21							Accept
		EOP No 15													
		REAR	13.5 ± 2 mm	14	14	14	14	14.5							Accept
		INBOARD	13.5 ± 2 mm	13	13	13	13	14							Accept
		OUTBOARD	13.5 ± 2 mm	14	14	13	14.5	13							Accept
3		FRONT	13.5 ± 2 mm	14	14	14	14	13							Accept

QC Comments : Measurement using Ruler ID CTRMAC:

*Measurement EOP in Diagram + with EOP No 17 from foorprint Core

AC 132 INSP

Overall Results : PASS (PASS / FAIL)

QC stamp & date

CTRM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB DROOP NOSE SONACA		
Part name	BOTTOM PANEL 5H		
Part number	V5746705i 000 00	Qty	1
G.R # / Work Order Router	A350i - 0203 - 0027		
Process area	LAY-UP		
Vendor / Customer name	SONACA		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	0027		
Inspected by	Juliana	Issue	
Drawing number	V5746705i	a) Drawing sheet:	
		b) Revision: -A.2	

Diagram :

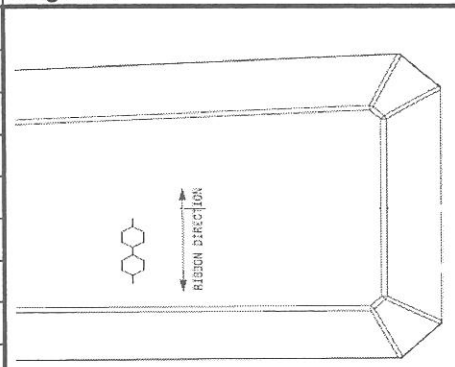


Figure A

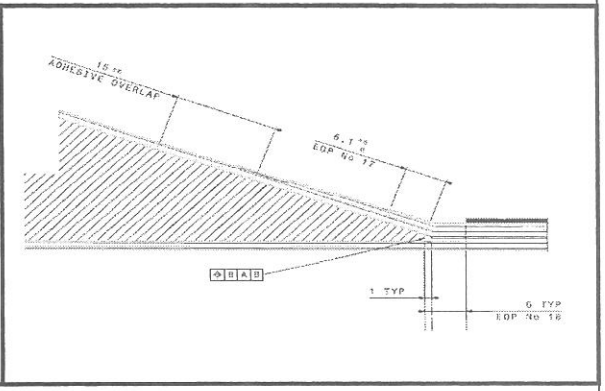


Figure B

No	Criteria	Area / Location	Standard / Requirement	Point of inspection 1	2	3	4	5							Accept / Reject
1	Ribbon Core	Figure A	Figure A	✓	✓	✓	✓	✓							Accept
2	Envelope Core Adhesive Over Lap EA 9695	Around Core	15 ± 6 mm	17	18	19	17	20							Accept
3	Envelope Core Adhesive Over Lap FM300M30	Around Core	15 ± 6 mm	20	21	16	17	19							Accept
4	GFRP	EOP No 17 / Figure B	6.1 + 6 mm	7	7	6.5	8	9							Accept
5	TEDLAR	EOP No 18 / Figure B	5 mm from CORE edge to landing area	4	3	3	4	4							Accept

QC Comments : measurement using ruler ID CTRMAC:

For Ribbon Core: Only Visual inspection: Only Tick (√) if good. Reject Core if wrong Ribbon Core

Overall Results : PASS (PASS / FAIL)

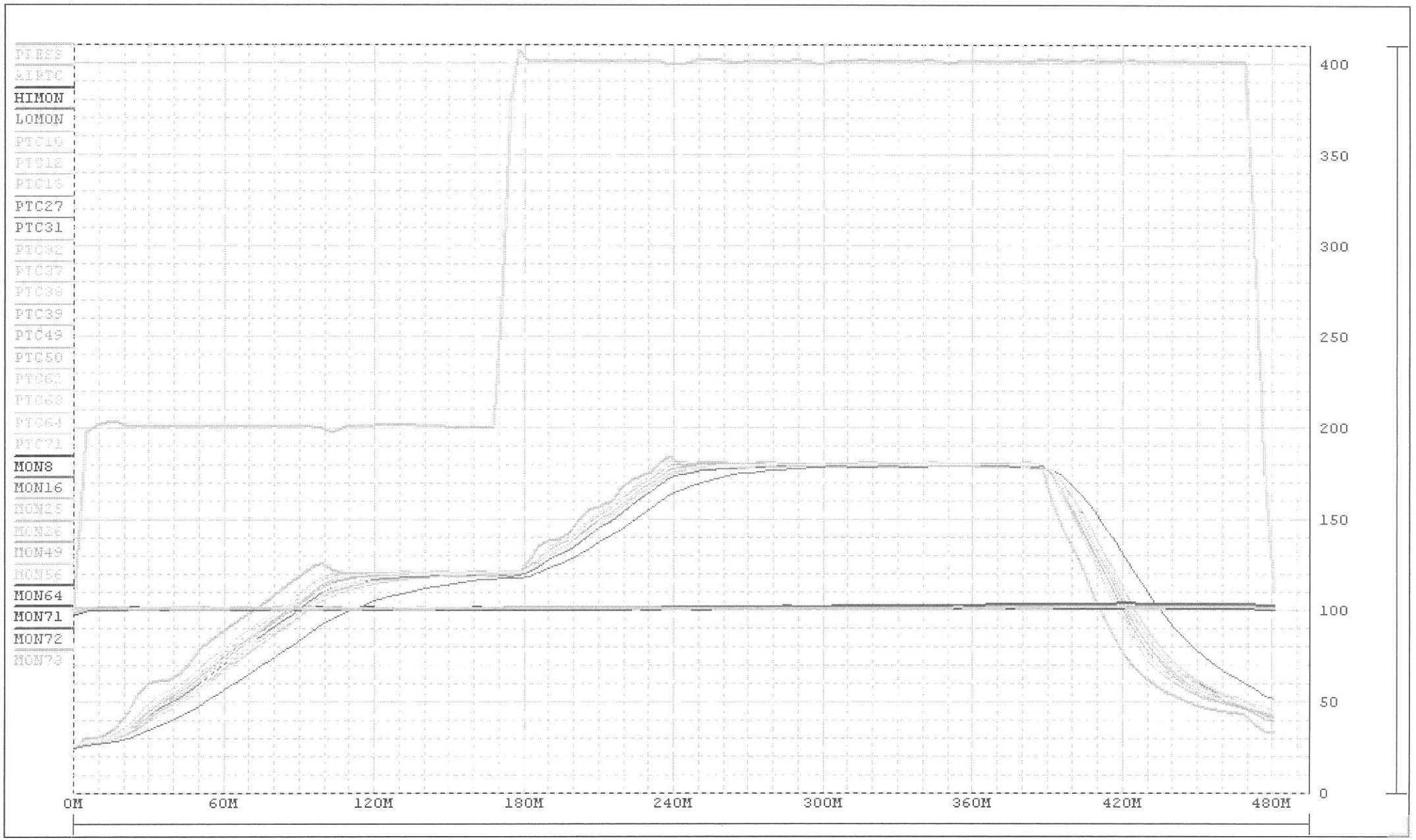
AC 132 INSP

QC stamp & date

Datafile Analysis - Trend View

Show data from..

Primary Sensors



Filename: AC4 20140203 001.DAT
LoadNumber: 7002
Filepath: C:\DATA\YEAR 2014\2-FEBRUARY 2014
Equipment:
Run Recipe:
Run Date: Monday, February 03, 2014
Run Time: 11:41:10 AM
File Length: 532951
OperatorName:

PART INFORMATION

PART INDEX #1
Part #: V5746601200000
Serial #: CSN 0024
Part Desc.: D.NOSE PNL 1 LH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 1 LH
Tool Set #:
Job Order #: A350S-0181-0024
Work Instr. #: A350SON-0181-01
Part TCs: PTC32 PTC39
Part Probes: MON73
Other Sensors:

PART INDEX #2
Part #: V5746601200100
Serial #: CSN 0025
Part Desc.: D.NOSE PNL 1 RH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 1 RH
Tool Set #:
Job Order #: A350S-0182-0025
Work Instr. #: A350SON-0182-01
Part TCs: PTC25 PTC62
Part Probes: MON25
Other Sensors:

PART INDEX #3
Part #: V5746602200000
Serial #: CSN 0027
Part Desc.: D.NOSE PNL 2 LH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 2 LH
Tool Set #:
Job Order #: A350S-0183-0027
Work Instr. #: A350SON-0183-01
Part TCs: PTC31 PTC37
Part Probes: MON72
Other Sensors:

PART INDEX #4
Part #: V5746602200100
Serial #: CSN 0026
Part Desc.: D.NOSE PNL 2 RH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 2 RH
Tool Set #:
Job Order #: A350S-0184-0026
Work Instr. #: A350SON-0184-01
Part TCs: PTC26 PTC63
Part Probes: MON26
Other Sensors:

PART INDEX #5
Part #: V5746603200000
Serial #: CSN 0028
Part Desc.: D.NOSE PNL 3 LH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 3 LH
Tool Set #:
Job Order #: A350S-0185-0028
Work Instr. #: A350SON-0185-01
Part TCs: PTC30 PTC38
Part Probes: MON71
Other Sensors:

PART INDEX #6
Part #: V5746603200100
Serial #: CSN 0024
Part Desc.: D.NOSE PNL 3 RH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 3 RH
Tool Set #:
Job Order #: A350S-0186-0024
Work Instr. #: A350SON-0186-01

Part TCs: PTC27 PTC64
Part Probes: MON64
Other Sensors:

PART INDEX #7
Part #: V5746604200000
Serial #: CSN 0024
Part Desc.: D.NOSE PNL 4 LH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 4 LH
Tool Set #:
Job Order #: A350S-0187-0024
Work Instr. #: A350SON-0187-01
Part TCs: PTC50 PTC51
Part Probes: MON49
Other Sensors:

PART INDEX #8
Part #: V5746604200100
Serial #: CSN 0024
Part Desc.: D.NOSE PNL 4 RH
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 4 RH
Tool Set #:
Job Order #: A350S-0188-0024
Work Instr. #: A350SON-0188-01
Part TCs: PTC71 PTC49
Part Probes: MON56
Other Sensors:

PART INDEX #9
Part #: V5746705100000
Serial #: CSN 0027
Part Desc.: D.NOSE PANEL 5 L/H
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 5 L/H
Tool Set #:
Job Order #: A350S-0203-0027
Work Instr. #: A350SON-0203-01
Part TCs: PTC12 PTC13
Part Probes: MON16
Other Sensors:

PART INDEX #10
Part #: V5746705100100
Serial #: CSN 0030
Part Desc.: D.NOSE PANEL 5 R/H
Project Code: CAC/SON/002
Jig Set #:
Cure Bed #: 5 R/H
Tool Set #:
Job Order #: A350S-0204-0030
Work Instr. #: A350SON-0204-01
Part TCs: PTC10 PTC11
Part Probes: MON8
Other Sensors:

Time	Elapsed	PTC10	PTC11	PTC12	PTC13	PTC25	PTC26	PTC27	PTC30	PTC31	PTC32	PTC37	PTC38	PTC39	PTC49	PTC50	PTC51	PTC62	PTC63	PTC64	PTC71	AIRTC	MON8	MON16	MON25	MON26	MON49	MON56	MON64	MON71	MON72	MON73	SVAC	PRESS	TSET_PAR	TSET_AIR	PSET
HH:MM:SS	Mins	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	Deg.C	kPa	kPa	kPa	kPa	kPa	kPa	kPa	kPa	kPa	kPa	kPa	kPa	Deg.C	Deg.C	kPa
3:40:19 AM	0	24.6	24.8	24.9	25	25.5	24.8	25	25.2	25.5	25.9	25.6	25.6	26.5	25.4	25.5	25.1	26.1	25.9	26	26.2	24	98.7	98.9	100.7	100.8	99.5	98.9	98	97.7	98.5	98.6	96.3	100.9	20	20	101
3:40:20 AM	0	24.6	24.8	24.9	25	25.5	24.8	25	25.2	25.5	25.9	25.6	25.6	26.5	25.4	25.5	25.1	26.1	25.9	26	26.2	24	98.7	98.9	100.7	100.8	99.5	98.9	98	97.7	98.5	98.6	97.6	100.9	20	20	101
3:40:21 AM	0	24.7	24.8	24.9	25	25.5	24.8	25	25.2	25.5	25.9	25.6	25.7	26.5	25.4	25.4	25.1	26.1	25.9	26	26.2	24.2	98.8	99.2	100.8	101	99.5	99.2	98.3	97.9	98.8	98.7	99	100.9	20	20	101
3:40:23 AM	0.1	24.7	24.8	24.9	25	25.5	24.8	25	25.2	25.5	25.9	25.6	25.7	26.5	25.4	25.4	25.1	26.1	25.9	26.1	26.2	24.2	99.1	99.6	100.6	100.8	99.5	99.3	98.4	98.3	98.7	99.1	98.9	101	30	20	101
3:41:22 AM	1.1	24.7	24.9	25	25.1	25.6	24.8	25.2	25.3	25.7	26.1	25.7	25.8	26.6	25.6	25.5	25.4	26.3	26	26.1	26.4	26.2	100.5	101	101.2	102.7	101.3	100.7	100.1	100.3	100.3	100.7	99	115.3	25.1	23.5	128.6
3:42:21 AM	2	25.5	25.4	25.5	25.7	25.9	25.3	25.5	26	26.5	26.6	26.1	26.5	27.5	26	25.9	26.2	26.9	26.7	26.6	26.7	29.5	100.6	100.9	101	101.2	101.4	100.7	100	100.1	100.1	100.4	99	142.7	26.1	24.7	158.1
3:43:20 AM	3	25.9	25.7	25.9	26	26.3	25.6	25.8	26.4	27	26.9	26.5	27	28	26.4	26.2	27	27.4	27.3	27.2	27.1	31.2	100.6	100.7	100.9	101.3	101	100.7	99.9	100.1	100.3	100.6	99.1	171.6	27.1	26.1	187.8
3:44:22 AM	4.1	26.6	26.2	26.3	26.3	26.7	25.9	26	26.9	27.6	27.5	26.8	27.8	28.5	27	26.7	27.9	28	27.9	27.7	27.5	31.5	100.4	100.6	100.8	101.3	101.2	100.8	99.9	99.9	100.3	100.4	99	195	28.1	27.6	201
3:45:21 AM	5	26.9	26.5	26.5	26.5	26.9	26.1	26.1	26.9	27.7	27.8	27.1	28.2	28.6	27.3	27	28.5	28.4	28.3	28	27.7	30.5	100.7	100.6	100.8	101.1	101	100.8	99.8	100.1	100.2	100.4	99.1	198	29.1	29.5	201
3:46:20 AM	6	27.3	26.8	26.8	26.7	27.1	26.3	26.3	27.1	27.9	28.1	27.4	28.6	28.8	27.6	27.3	28.9	28.7	28.6	28.4	28	30.2	100.4	100.6	100.8	101.4	101.1	100.7	99.9	100.2	100.3	100.3	98.9	200.1	30.1	31.2	201
3:47:22 AM	7.1	27.6	27.1	27	27	27.3	26.4	26.5	27.3	28.1	28.4	27.6	29	29	27.9	27.6	29.3	29	28.9	28.6	28.2	30.1	100.3	100.7	100.8	101	101	100.7	99.8	100	100.3	100.6	99.1	200.6	31.1	32.9	201
3:48:20 AM	8	27.9	27.3	27.1	27.2	27.5	26.6	26.6	27.4	28.2	28.6	27.8	29.2	29.2	28.1	27.9	29.6	29.2	29.1	28.8	28.4	29.9	100.4	100.8	100.9	101.1	101.2	100.7	100	100	100.1	100.4	99	200.5	32.1	34.5	201
3:49:22 AM	9.1	28.2	27.6	27.4	27.4	27.7	26.8	26.7	27.6	28.4	28.8	28	29.4	29.3	28.4	28.1	29.9	29.5	29.4	29.1	28.6	29.9	100.5	100.9	100.9	101.3	101.2	100.7	99.8	100.2	100.3	100.4	99.2	201.5	33.1	36.2	201
3:50:22 AM	10.1	28.5	27.9	27.6	27.6	27.9	27	26.9	27.8	28.6	29	28.2	29.6	29.5	28.6	28.4	30.2	29.7	29.6	29.3	28.9	30.1	100.5	100.7	100.8	101.2	101.3	100.7	99.8	100.2	100.1	100.6	99.2	201.7	34.1	38	201
3:51:20 AM	11	28.8	28.2	27.8	27.8	28	27.1	27.1	28	28.8	29.3	28.5	30	29.7	28.9	28.7	30.5	30	29.9	29.5	29	30.6	100.2	100.8	100.8	101.2	101.2	100.8	99.9	100.1	100.2	100.4	98.9	202	35.1	39.6	201
3:52:22 AM	12.1	29.2	28.5	28	28.1	28.2	27.3	27.2	28.2	29.1	29.6	28.7	30.3	29.9	29.2	29	30.9	30.3	30.3	29.8	29.3	31.7	100.4	100.8	100.8	101.4	101.2	100.7	99.9	100.1	100.2	100.4	98.9	202.7	36.1	41.2	201
3:53:21 AM	13	29.6	28.8	28.3	28.4	28.4	27.5	27.4	28.5	29.4	29.9	29.1	30.9	30.3	29.7	29.2	31.4	30.7	30.7	30.1	29.6	32.6	100.3	100.7	100.8	101.2	101.3	100.7	99.9	100.1	100.3	100.4	99.1	203.4	37.1	42.6	201
3:54:21 AM	14	30.1	29.2	28.6	28.7	28.7	27.7	27.6	28.8	29.7	30.3	29.4	31.4	30.7	30	29.6	32	31	31.1	30.5	29.9	33.7	100.2	100.7	100.9	101.3	101.1	100.7	99.8	100.1	100.1	100.6	99	204	38.1	44	201
3:55:22 AM	15.1	30.6	29.6	28.9	29.1	29	28	27.8	29.1	30.1	30.8	29.8	32	31.2	30.5	30	32.7	31.5	31.5	30.8	30.2	34.6	100.3	100.7	100.8	101.3	100.9	100.6	99.9	100.2	100.2	100.6	99.2	204.2	39.1	45.5	201
3:56:21 AM	16	31.2	30	29.3	29.5	29.3	28.2	28	29.5	30.5	31.3	30.2	32.6	31.7	30.9	30.5	33.3	32	32	31.3	30.6	35.7	100.3	100.8	100.8	101.2	101.3	100.8	99.8	100.1	100.3	100.6	99.1	204.7	40.1	46.8	201
3:57:20 AM	17	31.7	30.5	29.7	29.9	29.7	28.6	28.2	29.8	30.9	31.7	30.6	33.2	32.1	31.5	30.9	34	32.5	32.6	31.7	31	36.5	100.3	100.7	100.9	101.2	101.3	100.7	99.8	100.1	100.3	100.4	99.1	203.5	41.1	48.1	201
3:58:22 AM	18.1	32.3	31	30.1	30.3	30	29	28.5	30.3	31.4	32.3	31	33.8	32.7	32.1	31.4	34.8	33	33.2	32.2	31.4	37.6	100.4	100.6	100.8	101.2	101.3	100.7	99.7	100	100.2	100.4	99	201.8	42.1	49.3	201
3:59:21 AM	19	32.9	31.6	30.4	30.7	30.4	29.3	28.8	30.7	31.9	32.8	31.5	34.6	33.2	32.6	32	35.8	33.6	33.8	32.7	31.9	39	100.3	100.8	100.8	101.3	101.4	100.7	99.9	100	100.3	100.4	99	201.1	43.1	50.4	201
4:00:20 AM	20	33.6	32.1	31	31.2	30.8	29.7	29.2	31.2	32.5	33.5	32	35.4	33.9	33.3	32.6	36.7	34.2	34.3	33.3	32.4	40.2	100.4	100.8	100.8	101.2	101.3	100.6	100	100.1	100.2	100.1	99	200.6	44.1	51.4	201
4:01:22 AM	21.1	34.4	32.8	31.5	31.9	31.3	30.2	29.5	31.7	33.2	34.2	32.6	36.3	34.6	34.1	33.3	37.8	35	35.2	34	33	42.2	100.3	100.8	100.9	101.1	101.2	100.7	99.9	100.1	100.2	100.5	99.2	201.1	45.1	52.3	201
4:02:21 AM	22	35.4	33.6	32.1	32.5	31.9	30.7	29.9	32.4	33.9	35	33.2	37.4	35.4	34.9	34	38.9	35.8	36	34.7	33.7	44.3	100.5	100.8	100.8	101.2	101	100.6	99.9	100.2	100.3	100.4	99.2	201.1	46.1	53.2	201
4:03:22 AM	23.1	36.5	34.5	32.8	33.4	32.5	31.3	30.3	33.1	34.8	36	33.9	38.8	36.5	35.8	34.9	40.4	36.7	37.1	35.5	34.3	46.5	100.3	100.7	100.7	101.2	101.3	100.7	100	100	100.1	100.4	99	201.3	47.1	53.8	201
4:04:21 AM	24	37.6	35.4	33.5	34.2	33.3	31.9	30.8	34	35.8	37	34.6	40	37.6	36.9	35.8	41.9	37.8	38.1	36.4	35.1	49.5	100.5	100.7	101	101.3	101.3	100.6	99.9	100.1	100.1	100.3	99	201.1	48.1	54.2	201
4:05:21 AM	25	38.9	36.5	34.4	35.1	34.1	32.7	31.4	34.8	36.7	38.2	35.6	41.6	38.9	38.1	36.9	43.8	38.9	39.3	37.3	36	52.2	100.4	100.7	100.8	101.3	101.2	100.7	99.8	100	100.1	100.4	98.9	200.9	49.1	54.4	201
4:06:22 AM	26.1	40.2	37.6	35.2	36.1	34.9	33.4	32	35.8	37.8	39.4	36.5	43.2	40.2	39.4	38	45.6	40.1	40.6	38.4	37	54.6	100.4	100.7	100.7	101.1	101.2	100.7	99.9	100.1	100.1	100.3	99	200.6	50.1	54.6	201

4:07:21 AM	27	41.5	38.7	36.1	37.2	35.7	34.2	32.6	36.7	39	40.5	37.3	44.9	41.6	40.6	39.1	47.4	41.4	41.9	39.4	38	56.8	100.4	100.7	100.9	101.2	101.3	100.7	100	100.1	100.1	100.4	99	200.6	51.1	54.8	201
4:08:21 AM	28	42.9	39.9	37	38.3	36.6	35.1	33.3	37.8	40.1	41.9	38.3	46.3	42.9	41.9	40.3	49.2	42.6	43.1	40.6	39.1	58.6	100.3	100.6	100.8	101.2	100.9	100.7	99.8	100.1	100	100.6	99.1	200.6	52.1	55	201
4:09:21 AM	29	44.3	41	38	39.4	37.5	35.9	34	38.7	41.1	43.2	39.3	47.7	44.2	43.2	41.5	50.8	44	44.4	41.7	40.1	59.4	100.5	100.7	100.7	101	101.1	100.8	99.9	100.1	100.1	100.3	99	200.5	53.1	55.4	201
4:10:21 AM	30	45.4	42.1	38.9	40.3	38.4	36.8	34.5	39.6	42.2	44.3	40.4	49	45.4	44.4	42.7	52.3	45.1	45.5	42.7	41.2	60.2	100.4	100.7	101	101	101.1	100.7	99.9	100.2	100.1	100.2	98.8	200.6	54.1	55.8	201
4:11:22 AM	31.1	46.8	43.3	39.9	41.4	39.4	37.7	35.2	40.6	43.3	45.5	41.5	50.3	46.5	45.5	43.8	53.6	46.3	46.8	43.8	42.2	60.6	100.3	100.7	100.9	101.3	101	100.7	99.9	100.1	100.2	100.4	99	200.6	55.1	56.6	201
4:12:21 AM	32	47.8	44.3	40.8	42.2	40.2	38.5	35.9	41.4	44.2	46.5	42.4	51.3	47.5	46.6	44.8	54.8	47.5	47.9	44.9	43.2	61	100.3	100.8	100.7	101.2	101.3	100.8	99.7	100	100.2	100.4	99.1	200.6	56.1	57.4	201
4:13:20 AM	33	48.9	45.4	41.7	43.2	41	39.3	36.5	42.3	45.2	47.6	43.4	52.3	48.4	47.6	45.9	55.8	48.4	48.8	45.9	44.1	61.2	100.4	100.7	100.6	101.1	101.1	100.5	99.9	99.9	100.2	100.2	99.3	200.9	57.1	58.3	201
4:14:22 AM	34.1	50	46.5	42.5	44.2	41.8	40	37.1	43.1	46.1	48.6	44.4	53.3	49.4	48.5	47	56.8	49.4	49.8	46.8	45.1	61.4	100.5	100.7	100.8	101.1	101	100.8	99.8	100.1	100.2	100.4	99.2	201	58.1	59.4	201
4:15:21 AM	35	51	47.5	43.4	45	42.6	40.8	37.8	43.9	46.9	49.5	45.2	54.1	50.2	49.4	47.9	57.5	50.4	50.7	47.6	46	61.6	100.4	100.7	100.7	101.4	101.3	100.6	99.9	100.1	100	100.5	98.9	201	59.1	60.6	201
4:16:22 AM	36.1	52	48.4	44.2	45.8	43.5	41.5	38.4	44.6	47.7	50.4	46	54.9	51.1	50.4	48.9	58.2	51.2	51.5	48.5	46.9	61.7	100.6	100.8	100.8	101.2	101.2	100.7	99.9	100	100.2	100.6	98.9	201.1	60.1	61.9	201
4:17:22 AM	37.1	52.8	49.3	45	46.7	44.3	42.2	39.1	45.3	48.6	51.2	46.8	55.7	51.8	51.2	49.7	58.9	52.1	52.5	49.4	47.7	61.9	100.3	100.8	100.8	101.2	101.2	100.6	100	100.2	100	100.4	98.9	201.3	61.1	63.2	201
4:18:20 AM	38	53.6	50.1	45.8	47.4	44.9	42.9	39.6	45.9	49.2	52	47.6	56.3	52.5	51.9	50.5	59.6	52.9	53.2	50.1	48.5	62.4	101.4	100.8	100.8	101.3	101.3	100.7	99.9	100	100.1	100.5	99.1	201.5	62.1	64.5	201
4:19:22 AM	39.1	54.5	51	46.6	48.2	45.6	43.6	40.2	46.6	50.1	52.8	48.4	57	53.2	52.8	51.3	60.2	53.7	54	51	49.4	63.2	101.3	100.6	100.9	101.4	101.3	100.7	99.9	100.1	100.1	100.4	99.1	201.4	63.1	65.9	201
4:20:21 AM	40	55.3	51.8	47.4	48.9	46.3	44.4	40.9	47.3	50.8	53.6	49.2	57.7	54	53.6	52.1	60.9	54.5	54.8	51.7	50.2	63.8	101.4	100.6	100.9	101.4	101.2	100.7	100	100.2	100	100.4	99	201.2	64.1	67.2	201
4:21:22 AM	41.1	56.1	52.7	48.2	49.7	47.1	45.1	41.5	48.1	51.6	54.3	50	58.5	54.7	54.4	52.9	61.6	55.4	55.6	52.5	51	64.5	100.4	100.7	100.9	101.4	101.2	100.7	99.9	100.1	100.1	100.4	99.2	201.1	65.1	68.6	201
4:22:21 AM	42	57	53.5	48.9	50.5	47.8	45.8	42.2	48.9	52.5	55.2	50.7	59.3	55.5	55.2	53.8	62.3	56.1	56.4	53.3	51.8	65.5	100.2	100.9	100.8	101.3	101.1	100.7	99.9	100	100.1	100.3	98.9	201.1	66.1	69.8	201
4:23:21 AM	43	57.9	54.3	49.8	51.4	48.6	46.5	42.9	49.6	53.3	56	51.4	60.1	56.3	55.9	54.6	63.1	56.9	57.2	54	52.6	66.4	100.3	100.7	100.8	101.2	101.3	100.8	99.7	100.1	100	100.5	99.1	201.1	67.1	71.1	201
4:24:22 AM	44.1	58.6	55.2	50.6	52.1	49.4	47.3	43.5	50.4	54.2	56.9	52.3	61	57.2	56.8	55.5	64	57.7	58	54.9	53.4	67.9	100.4	100.7	100.7	101.3	101.4	100.7	99.7	100.1	99.9	100.2	98.9	201	68.1	72.1	201
4:25:21 AM	45	59.7	56.2	51.4	53.1	50.1	48.1	44.2	51.2	55	57.8	53.1	62	58.1	57.7	56.4	64.9	58.6	58.9	55.8	54.2	69.4	100.2	100.8	100.8	101.3	101.3	100.7	100	100.2	99.9	100.3	99	201	69.1	73.2	201
4:26:20 AM	46	60.6	57	52.2	53.9	50.9	49	44.9	52.1	56	58.6	53.8	63.1	59	58.6	57.2	66.1	59.5	59.8	56.7	55.2	71.1	100.3	100.6	100.7	101.3	101	100.9	99.9	100.1	99.9	100.5	99	201.2	70.1	74.1	201
4:27:21 AM	47	61.7	58	53.1	54.9	51.9	49.8	45.7	53.1	57.1	59.7	54.7	64.4	60.3	59.7	58.2	67.3	60.5	60.8	57.6	56.1	73.1	100.3	100.9	100.8	101.1	101.3	100.7	99.8	100	100	100.5	99.1	201.2	71.1	74.9	201
4:28:21 AM	48	62.9	59.1	54.1	56	52.8	50.8	46.5	54.1	58.2	60.8	55.6	65.6	61.4	60.9	59.3	68.6	61.6	62	58.5	57	74.6	100.4	100.7	100.8	101.1	100.9	100.9	99.7	100	100.2	100.5	99	200.7	72.1	75.6	201
4:29:20 AM	49	64	60.3	55.2	57	53.7	51.7	47.3	55	59.1	61.8	56.6	66.9	62.6	62.1	60.4	69.9	62.8	63.1	59.5	58	76.6	100.2	100.6	100.8	101	101.2	100.7	99.9	100	99.9	100.3	99.1	200.8	73.1	76.2	201
4:30:21 AM	50	65.2	61.4	56.2	58.1	54.7	52.6	48	56	60.3	63	57.5	68.2	63.8	63.2	61.5	71.3	63.9	64.3	60.5	59.1	78.3	100.3	100.8	100.9	101.4	101.2	100.7	100	100.1	100.2	100.3	98.8	200.7	74.1	76.9	201
4:31:21 AM	51	66.4	62.4	57.1	59.1	55.8	53.6	48.8	57.1	61.3	64.1	58.4	69.4	65	64.3	62.6	72.8	65.1	65.5	61.6	60.3	79.9	100.3	100.7	100.8	101.2	101.2	100.7	99.9	100	100	100.5	99.2	200.8	75.1	77.4	201
4:32:22 AM	52.1	67.6	63.6	58.2	60.2	56.8	54.6	49.7	58.1	62.5	65.4	59.6	70.5	66.2	65.5	63.8	74.2	66.4	66.8	62.7	61.4	81.3	100.5	100.7	100.7	101.3	101.1	100.7	100	100.1	99.8	100.4	99.1	200.8	76.1	78	201
4:33:21 AM	53	68.7	64.8	59.2	61.3	57.8	55.5	50.5	59.2	63.5	66.5	60.5	71.9	67.4	66.8	65.1	75.4	67.5	67.9	63.7	62.4	82.1	100.3	100.6	100.8	101.3	101.1	100.7	100	100.2	100	100.3	99.1	200.8	77.1	82.3	201
4:34:21 AM	54	69.9	65.9	60.3	62.3	58.9	56.5	51.4	60.2	64.6	67.7	61.6	72.9	68.6	67.9	66.2	76.6	68.7	69	64.7	63.4	83.1	100.4	100.6	100.8	101.2	101.3	100.7	99.7	100.2	100	100.4	98.9	200.9	78.1	83.1	201
4:35:20 AM	55	71	67	61.2	63.3	59.8	57.4	52.3	61.1	65.7	68.8	62.6	74.1	69.7	68.9	67.2	77.9	69.7	70	65.8	64.6	84.1	100.5	100.7	100.6	101.1	101.2	100.7	99.8	100.1	100.2	100.3	98.9	201.1	79.1	83.9	201
4:36:21 AM	56	72.1	68	62.2	64.4	60.9	58.4	53.2	62.1	66.7	69.8	63.7	75.3	70.7	70.1	68.4	79	70.8	71.1	66.8	65.7	85.2	100.2	100.7	100.8	101.3	101.1	101	99.9	100	99.9	100.5	99.1	201.1	80.1	84.8	201
4:37:20 AM	57	73.3	69.2	63.2	65.4	61.9	59.4	54.1	63	67.8	70.9	64.6	76.3	71.8	71.2	69.5	80.1	72	72.1	67.9	66.7	86.2	100.3	100.6	100.8	101.4	100.9	100.8	100	100.1	100.2	100.5	98.9	201.1	81.1	85.9	201
4:38:22 AM	58.1	74.4	70.2	64.2	66.4	62.9	60.5	54.9	64	68.8	72	65.7	77.3	72.8	72.2	70.6	81.2	73.1	73.3	68.9	67.8	87.1	100.5	100.6	100.8	101.1	101	100.7	99.9	100	99.8	100.3	99	201.1	82.1	86.8	201
4:39:21 AM	59	75.5	71.2	65.2	67.4	63.9	61.4	55.7	65	69.9	73	66.6	78.4	73.9	73.4	71.6	82.3	74.1	74.3	70	68.8	88	100.4	100.8	100.8	101.1	101.2	100.7	100	100.1	99.9	100.3	99	201	83.1	87.7	201
4:40:22 AM	60.1	76.6	72.4	66.2	68.5	64.8	62.3	56.6	66	70.8	74.1	67.6	79.5	74.9	74.6	72.7	83.5	75.2	75.4	71.1	69.9	89	100.4	100.6	100.8	101.3	101.4	100.7	99.7	99.9	100.1	100.4	99.1	201	84.1	88.6	201
4:41:21 AM	61	77.8	73.5	67.3	69.5	65.9	63.4	57.4	67.1	72	75.2	68.6	80.5	75.9	75.6	73.7	84.4	76.3	76.5	72	70.9	89.9	100.4	100.7	100.8	101.2	101.1	100.7	99.9	100.1	100	100.4	99	201.1	85.1	89.6	201
4:42:22 AM	62.1	78.8	74.5	68.2	70.6	66.9	64.3	58.3	67.9	72.9	76.2	69.6	81.6	77	76.6	74.7	85.4	77.3	77.5	73.1	71.9	90.8	100.3	100.6	100.9	101.3	101	100.7	99.8	100	100	100.4	99.3	201.1	86.1	90.6	201
4:43:21 AM	63	79.9	75.6	69.3	71.6	67.9	65.2	59.2	68.9	74	77.3	70.6	82.6	78.1	77.7	75.8	86.5	78.5	78.7	74.1	73	91.7	100.3	100.7	100.8	101.2	101	100.7	99.8	100.1	100	100.5	98.9	201	87.1	91.6	201
4:44:21 AM	64	81	76.7	70.4	72.7	68.8	66.2	60	69.9	75.1	78.5	71.7	83.6	79.1	78.6	76.9	87.4	79.5	79.7	75.1	74	92.6	100.4	100.7	100.8	101.3	101	100.8	99.8	100.1	100	100.3	99.2	200.9	88.1	92.6	201
4:45:21 AM	65	82.1	77.8	71.4	73.7	69.9	67.2	60.9	70.9	76.1	79.4	72.6	84.6	80.1	79.5	78	88.5	80.6	80.7	76.1	75.1	93.7	100.3	100.6	100.8	101.3	101.3	100.7	100	100.1	100.1	100.4	99.1	201.1	89.1	93.6	201
4:46:21 AM	66	83.1	78.8	72.3	74.6	70.9	68.1	61.8	71.9	77.1	80.4	73.4	85.5	81.1	80.7	79	89.5	81.6	81.8	77.2	76.1	94.7	100.4	100.7	100.9	101.3	101.3	100.7	99.8	100.1	100	100.4	99	201.1	90.1	94.6	201
4:47:20 AM	67	84.1	79.8	73.5	75.7	72	69.1	62.6	72.8	78.1	81.4	74.4	86.5	82	81.7	80	90.5	82.5	82.7	78.1	77.1	95.5	100.2	100.6	100.9	101.2	101.2	100.7	99.8	100.1	99.9	100.4	99	200.9	91.1	95.6	201
4:48:21 AM	68	85.2	80.9	74.6	76.8	72.9	70	63.5	75.2	79	82.5	75.3	87.5	83.2	82.7	81.1	91.5	83.5	83.6	79.1	78.1	96.7	100.3	100.6	100.6	101.1	101.4	100.8	99.7	100.1	99.9	100.3	99	201	92.1	96.5	201
4:49:20 AM	69	86.2	81.9	75.6	77.8	73.9	71.1	64.4	74.6	80	83.5	76.3	88.5	84.1	83.6	82.1	92.5	84.5	84.7	80	79.1	97.4	100.4	100.6	100.8	101.1	101.3	100.7	99.8	100.1	100.2	100.2	99.1	201.1	93.1	97.6	201
4:50:22 AM	70.1	87.2	83	76.7	78.8	74.9	72.1	65.3	75.7	81.1	84.4	77.1	89.4	85.1	84.7	83.2	93.5	85.5	85.6	81	80.2	98.3	100	100.6	100.8	101.1	101.1	100.8	99.9	100	100.2	100.4	98.9	200.9	94.1	98.7	201
4:51:21 AM	71	88.3	84	77.8	79.9	75.9	73	66.1	77.1	81.9	85.5	78.1	90.3	86.1	85.7	84.2	94.4	86.5	86.6	81.9	81.1	99	100.2	100.8	100.8	101.3	101	100.7	99.9	100.1	99.8	100.4	99	201.1	95.1	99.8	201
4:52:20 AM	72	89.2	85	78.7	80.9	76.8	74	67.1	78.1	82.9	86.4	79	91.3	87	86.7	85.1	95.4	87.5	87.6	82.9	82.2	100	100.5	100.6	100.8	101.2	101.1	100.8	99.7	100	100.1	100.5	98.8	201	96.1	100.8	201
4:53:22 AM	73.1	90.1	86	79.7	81.9	77.9	74.8	68	79.1	84	87.4	80	92.3	88	87.7	86.2	96.3	88.4	88.6	83.9	83.2	101	100.4	100.7	100.8	101.1	101.2	100.7	99.9	99.9	100	100.4	99.1	201.1	97.1	101.9	201
4:54:21 AM	74	91.1	87	80.7	82.8	78.9	75.7	68.8	80.2	84.9	88.4	81	93.3	89	88.7	87.1	97.2	89.5	89.6	84.8	84.1	101.9	100.5	100.6	100.8	101.1	101.1	100.8	99.6	100.1	99.9	100.5	98.9	201	98.1	102.8	201
4:55:20 AM	75	92	87.9	81.7	83.8	79.8	76.7	69.7	81.3	85.8	89.3	81.9	94.2	89.9	89.7	88.1	98.2	90.4	90.5	85.7	85.1	102.7	100.3	100.6	100.8	101.1	100.9	100.7	100.5	100.1	100.2	100.5	99.2	201.1	99.1	103.9	201
4:56:22 AM	76.1	93	89	82.7	84.9	80.9	77.7	70.7	81.2	86.8	90.3	82.9	95.2	90.9	90.7	89.1	99.2	91.5	91.4	86.6	86	103.8	100.5	100.6	100.7	101.3	101.2	100.9	99.9	100	100.2	100.4	99.2	201	100.1	105	201
4:57:20 AM	77	94	90	83.7	85.8	81.8	78.6	71.5	82.2	87.7	91.2	83.7	96.2	91.9	91.6	90.1	100.1	92.4	92.4	87.5	87	104.7	100.2	100.7	100.7	101.3	101.4	100.7	99.8	100.1	99.9	100.6	99.1	200.9	101.1	105.9	201
4:58:22 AM	78.1	95.2	91	84.8	86.9	82.8	79.7	72.4	83.2	88.9	92.2	84.8	97.3	92.9	92.6	91.1	101	93.4	93.3	88.5	88	105.9	100.2	100.8	100.8	101.3	101.2	100.7	99.7	99.9	100.1	100.3	99.1	201	102.1	106.9	201
4:59:21 AM	79	96.1	92	85.9	87.9	83.8	80.7	73.3	84	89.7	93.1	85.7	98.1	93.9	93.7	92.1	102	94.3	94.3	89.5	88.9	107	100.4	100.6	100.8	101.2	101.2	100.7	99.8	100.1	100	100.4	99	201.1	103.1	108	201
5:00:22 AM	80.1	97.1	92.9	86.8	88.8	84.7	81.7	74.2	85	90.7	94.1	86.6	99.1	94.8	94.7	93.1	103	95.3	95.4	90.4	89.9	107.9	100.3	100.6	100.8	101.3	101.1	100.7	99.9	99.9	100.1	100.3	99	201.1	104.1	109	201
5:01:21 AM	81	98	93.9	87.8	89.7	85.8	82.6	75.1	85.9	91.6	95.1	87.5	100.1	95.9	95.7	94	104	96.3	96.4	91.4	90.9	109	100.5	100.6	100.8	101.2	101	100.8	99.8	100.1	100	100.3	99.2	201	105.1	110	201
5:02:21 AM	82	99	94.8	88.8	90.8	86.8	83.6	76	86.9	92.7	96.1	88.4	101	96.8	96.7	95	105	97.3	97.3	92.3	91.8	110	100.4	100.7	100.8	101.1	101.2	100.7	99.8	100.1	100.1	100.4	99.1	201.2	106.1	111.2	201
5:03:22 AM	83.1	100	95.8	89.9	91.7	87.7	84.6	77	87.8	93.7	97.1	89.4	102	97.8	97.7	96	106	98.3	98.3	93.3	92.8	111.2	100.2	100.7	100.6	101.1	101.2	100.7	99.7	100.1	99.9	100.2	99.1	201.1	107	112.1	201
5:04:21 AM	84	101	96.9	91	92.6	88.7	85.5	77.9	88.9	94.6	98.1	90.5	103.2	98.9	98.8	97.1	107.1	99.2	99.2	94.3	93.8	112.2	100.3	100.6	100.8	101.2	101.1	100.7	99.8	100.1	100	100.2	99	201.1	108.1	113	201
5:05:20 AM	85	102	97.9	92	93.6	89.7	86.5	78.8	90	95.8	99.2	91.5	104.2	100	99.8	98.1	108.1	100.3	100.2	95.2	94.8	113.6	100.3	100.6	100.8	101.2	101	100.9	99.8	100.1	100	100.3	99.3	201.1	109.1	113.8	201
5:06:21 AM	86	103	98.9	92.9	94.5	90.7	87.6	79.8	90.9	96.8	100.1	92.6	105.3	101.1	101	99.1	109.3	101.1	101.1	96.2	95.8	114.7	100.2	100.6	100.8	101.2	101.2	100.7	99.9	100.2	100.2	100.4	99.2	201	110	114.8	201
5:07:20 AM	87	104.1	100	94	95.6	91.8	88.6	80.6	91.8	97.8	101.2	93.4	106.4	102.2	101.9	100.2	110.3	102.1	102.2	97.3	96.9	115.9	100.4	100.6	100.7	101.1	101.1	100.8	99.9	100	100	100.4	99.1	200.9	111.1	115.8	201
5:08:20 AM	88	105.1	101.1	95.2	96.7	92.8	89.5	81.7	92.8	98.8	102.3	94.5	107.4	103.2	103	101.3	111.5	103.3	103.3	98.3	97.8	117	100.5	100.7	100.8	101.2	100.9	100.7	99.8	100	100.1	100.4	99.1	201	112.1	116.7	201
5:09:23 AM	89.1	106.2	102.2	96.2	97.9	94	90.6	82.6	93.9	99.9	103.4	95.6	108.6	104.3	104	102.4	112.6	104.5	104.4	99.3	98.8	118.2	100.2	100.6	100.8	101.2	101.1	100.6	99.9	100.1	100.1	100.4	99	200.9	113.1	117.6	201
5:10:20 AM	90	107.3	103.3	97.5	98.9	94.9	91.6	83.5	95	100.9	104.4	96.4	109.6	105.3	105.1	103.4	113.6	105.5	105.5	100.4	99.8	119.2	100.4	100.6	100.8	101.2	101.1	100.8	99.9	100.1	100.3	100.4	98.9	201.1	114.1	118.5	201
5:11:22 AM	91.1	108.5	104.3	98.5	99.9	96	92.6	84.5	95.9	102	105.5	97.5	110.7	106.5	106.2	104.4	114.7	106.7	106.5	101.4	101	120.3	100.3	100.7	100.8	101.3	101.2	100.7	99.9	100.2	100	100.5	99	201	115.1	119.5	201
5:12:21 AM	92	109.5	105.3	99.4	100.8	97	93.6	85.4	96.8	103	106.5	98.5	111.6	107.5	107.3	105.5	115.7	107.6	107.4	102.4	101.9	121.3	100.2	100.6	100.7	101.4	101.1	100.8	99.8	100.1	99.9	100.2	99	201.1	116.1	120.5	201
5:13:22 AM	93.1	110.6	106.4	100.5	102	97.9	94.6	86.4	97.8	104	107.5	99.6	112.7	108.5	108.4	106.6	116.8	108.6	108.5	103.4	103	122.1	100.4	100.6	100.7	101.2	101.1	100.7	100	100.1	100	100.5	99.1	201	117.1	121.5	201
5:14:22 AM	94.1	111.6	107.4	101.5	103	99	95.6	87.3	98.7	105.1	108.6	100.5	113.6	109.5	109.3	107.6	117.8	109.7	109.6	104.5	104	122.9	100.2	100.6	100.8	101.2	101.1	100.7	100	100.2	100.2	100.6	99	201.1	118.1	122.6	201
5:15:21 AM	95	112.6	108.3	102.4	104	99.8	96.5	88.2	99.6	106	109.5	101.4	114.5	110.5	110.3	108.6	118.8	110.6	110.5	105.4	105	123.8	100.4	100.6	100.8	101.1	101.2	100.8	100	100.1	99.9	100.3	98.9	201	119.1	123.7	201
5:16:22 AM	96.1	113.6	109.3	103.5	105	100.9	97.5	89.2	100.6	107	110.5	102.5	115.4	111.5	111.4	109.6	119.8	111.6	111.5	106.5	106	124.7	100.4	100.6	100.8	101.3	101.3	100.7	99.9	100.1	100	100.4	99	201.1	120	124.6	201
5:17:21 AM	97	114.6	110.3	104.5	106.1	101.9	98.5	90.1	101.7	108	111.6	103.2	116.4	112.5	112.4	110.6	120.8	112.7	112.6	107.4	107	125.2	100.3	100.6	100.8	101.2	101.2	100.6	99.8	100.3	100	100.4	99.1	200.8	120	123.7	201
5:18:21 AM	98	115.6	111.3	105.6	107.1	102.9	99.5	91.1	102.5	109	112.6	104.1	117.3	113.4	113.2	111.7	121.7	113.7	113.5	108.5	107.9	126	100.1	100.7	100.7	101.1	101.1	100.7	99.8	100	100.3	100.5	99	201.1	120	122.7	201
5:19:21 AM	99	116.6	112.3	106.6	108.1	103.9	100.4	92.1	103.5	110	113.6	105.1	118.3	114.4	114.2	112.6	122.5	114.6	114.4	109.4	108.9	126.5	100.3	100.6	100.8	101.2	101	100.5	100.7	100.1	100.1	100.5	99	200.2	120	121.8	201
5:20:21 AM	100	117.2	113.1	107.4	108.8	104.8	101.3	92.9	104.2	110.5	114.3	105.9	118.7	115	114.9	113.3	122.9	115.4	115.3	110.2	109.7	125.1	100.2	100.7	100.9	101.3	101.3	100.8	100.7	100.2	100.3	100.5	99.4	199.5	120	121.3	201
5:21:20 AM	101	117.8	113.8	108.3	109.6	105.5	102	93.8	104.9	111.2	114.9	106.6	119.2	115.6	115.4	114	123.2	116.1	115.9	111	110.5	124.4	100.4	100.8	100.8	101.2	101.3	100.7	99.7	100.2	100.3	100.5	99.1	199.3	120	120.9	201
5:22:21 AM	102	118.4	114.5	109	110.3	106.3	102.8	94.5	105.5	111.8	115.5	107.4	119.6	116.1	116	114.6	123.5	116.7	116.5	111.7	111.2	123.9	100.4	100.6	100.8	101.3	101.2	100.8	99.9	100.1	100.3	100.4	99.1	198.9	120	120.5	201
5:23:20 AM	103	118.8	114.9	109.6	110.7	106.9	103.5	95.2	106	112.2	115.9	107.9	119.7	116.4	116.2	115	123.3	117.1	116.8	112.3	111.7	122.1	100.2	100.7	100.7	101.2	101.2	100.7	99.7	100.1	100.3	100.5	99	197.8	120	120.3	201
5:24:22 AM	104.1	118.9	115.3	110.2	111.1	107.5	104.1	96	106.4	112.5	116.2	108.3	119.6	116.4	116.3	115.4	123	117.3	117.1	112.8	112.3	120.8	101.3	100.6	100.7	101.4	101.3	100.8	99.8	100.1	100.2	100.5	99	197.6	120	120.4	201
5:25:20 AM	105	119.2	115.7	110.6	111.5	108	104.7	96.6	106.9	113	116.5	108.9	119.7	116.7	116.7	115.8	122.9	117.6	117.4	113.2	112.7	120.5	100.3	100.7	100.6	101.1	101.2	100.7	99.9	100.1	100.2	100.5	98.9	197.8	120	120.3	201
5:26:20 AM	106	119.5	116.1	111.2	112	108.6	105.3	97.4	107.3	113.4	116.9	109.4	119.9	117	117.1	116.1	122.9	118	117.7	113.7	113.2	120.7	100.4	100.7	100.8	101.1	101.2	100.8	99.9	100.1	100.3	100.3	99.1	199.8	120	120.1	201
5:27:22 AM	107.1	119.8	116.5	111.7	112.4	109.1	106	98	107.8	113.8	117.2	110	120	117.2	117.4	116.5	122.8	118.3	118	114.1	113.7	120.9	100.3	100.7	100.8	101.2	101.2	101.3	99.9	100	100.2	100.5	99.1	199.9	120	120	201
5:28:20 AM	108	119.9	116.8	112.1	112.8	109.6	106.6	98.6	108.2	114.2	117.4	110.3	120.2	117.5	117.6	116.8	122.7	118.5	118.3	114.5	114.1	120.4	100.4	100.6	100.7	101.2	101.1	100.7	99.8	100	100.3	100.4	99.2	200.7	120	119.8	201
5:29:22 AM	109.1	120	117.1	112.6	113.1	109.9	107	99.2	108.7	114.5	117.6	110.7	120.2	117.6	117.8	117	122.5	118.7	118.5	114.8	114.5	119.9	100.4	100.7	100.7	101.2	101.2	100.7	100	100.1	100.2	100.4	99	200.9	120	119.8	201
5:30:21 AM	110	120.2	117.3	113	113.5	110.5	107.6	99.9	109	114.9	117.9	111.2	120.3	117.9	118	117.3	122.5	118.9	118.7	115.1	114.8	120	100.4	100.7	100.8	101.3	101.2	100.7	100	100.1	100.1	100.6	99.1	201.1	120	119.6	201
5:31:22 AM	111.1	120.3	117.7	113.4	113.8	110.9	108.2	100.5	109.4	115.2	118.1	111.6	120.4	118.1	118.2	117.6	122.5	119	118.9	115.5	115.2	120.4	100.2	100.7	100.8	101	101	100.7	99.9	100.1	100.3	100.3	99.2	201.4	120	119.6	201
5:32:22 AM	112.1	120.4	117.9	113.8	114.1	111.3	108.7	101.1	109.8	115.4	118.3	111.9	120.5	118.2	118.4	117.7	122.4	119.2	119.1	115.9	115.5	120.1	100.2	100.6	100.8	101.3	101.2	100.7	99.8	100.1	100.2	100.3	99	200.9	120	119.5	201
5:33:21 AM	113	120.4	118.1	114.1	114.3	111.7	109.1	101.6	110.2	115.7	118.4	112.3	120.6	118.5	118.5	118	122.2	119.4	119.2	116.1	115.8	119.8	100.2	100.7	100.7	101	101.1	100.9	99.9	100	100.2	100.6	99.2	201	120	119.4	201
5:34:22 AM	114.1	120.6	118.3	114.4	114.6	112.1	109.6	102.2	110.6	115.9	118.6	112.7	120.7	118.6	118.6	118.2	122.1	119.5	119.4	116.4	116.1	119.9	100.4	100.6	100.8	101.2	100.9	100.7	99.7	100.3	100.3	100.5	99.1	201	120	119.3	201
5:35:21 AM	115	120.6	118.5	114.7	114.9	112.5	110	102.7	111	116.2	118.7	113.1	120.8	118.8	118.8	118.4	122.1	119.6	119.6	116.6	116.3	119.9	100.5	100.7	100.6	101.3	100.8	100.7	99.7	100.1	100.2	100.4	99.3	200.9	120	119.2	201
5:36:21 AM	116	120.7	118.7	115	115.2	112.8	110.4	103.2	111.4	116.5	118.9	113.5	120.9	119	119	118.6	122.1	119.8	119.7	116.9	116.6	120	101.2	100.7	100.8	101.3	101.1	100.8	100	100.1	100.3	100.4	99.1	201.2	120	119.1	201
5:37:22 AM	117.1	120.7	118.9	115.3	115.4	113.1	110.8	103.7	111.7	116.7	119	113.7	121	119.2	119.1	118.8	122.1	119.9	119.8	117.1	116.9	120.2	100.4	100.6	100.8	101.1	101	100.7	99.9	100.1	100.2	100.4	99.1	201.2	120	119	201
5:38:21 AM	118	120.7	119	115.5	115.6	113.5	111.3	104.1	112	116.9	119.2	114	121	119.3	119.1	118.9	121.9	120	120	117.3	117.1	119.5	100.6	100.8	100.8	101.2	101	100.7	99.8	100.1	100.2	100.6	98.9	200.1	120	119	201

5:39:21 AM	119	120.6	119.1	115.7	115.8	106.4	106.9	104.5	112.3	117	119.1	114.2	120.8	119.3	119.1	119.1	121.6	120	119.9	117.5	117.3	118.4	100.5	100.7	100.8	101.2	101.2	100.6	99.8	100.2	100.4	100.2	99	201.6	120	119.2	201
5:40:20 AM	120	120.5	119.1	115.9	115.9	109.8	102.5	105	112.5	117.1	119	114.4	120.8	119.4	119.1	119.1	121.4	120	119.9	117.5	117.4	118.2	100.3	100.8	100.8	101.1	101.2	100.7	99.9	100.2	100.2	100.6	98.9	201.8	120	119.2	201
5:41:21 AM	121	120.5	119.2	116	116.1	111.4	106	105.5	112.7	117.2	119.1	114.6	120.7	119.3	119.2	119.2	121.3	120	120	117.7	117.6	118.5	100.5	100.7	100.7	101.2	101	100.6	99.9	100	100.3	100.2	98.9	202	120	119.3	201
5:42:21 AM	122	120.5	119.3	116.2	116.2	113.4	110.3	105.9	113	117.3	119.2	114.9	120.7	119.4	119.2	119.3	121.3	120	120	117.9	117.7	118.8	100.3	100.7	100.7	101.2	101.1	100.7	100	100.1	100.3	100.5	99.1	202.3	120	119.3	201
5:43:22 AM	123.1	120.5	119.4	116.4	116.4	113.3	110	106.3	113.2	117.4	119.2	115.1	120.8	119.6	119.4	119.5	121.2	120.1	120.1	117.9	118	119.2	100.1	100.7	100.7	101	101.1	100.6	99.9	99.9	100.2	100.6	99	202.4	120	119.2	201
5:44:21 AM	124	120.5	119.6	116.6	116.7	112.8	97.2	106.7	113.5	117.6	119.2	115.4	120.9	119.8	119.5	119.6	121.3	120.2	120.2	118.2	118.1	119.5	100.4	100.6	100.8	101.1	101	100.7	99.8	100.1	100.2	100.5	99.2	202.4	120	119.1	201
5:45:20 AM	125	120.5	119.6	116.8	116.7	114.5	112.5	107.1	113.7	117.7	119.2	115.5	120.8	119.8	119.4	119.6	121.1	120.2	120.2	118.2	118.3	118.7	100.5	100.8	100.8	101.1	101.1	100.7	100	100.1	100.3	100.5	99.1	201.9	120	119.1	201
5:46:21 AM	126	120.5	119.7	116.9	117	114.7	112.6	107.5	114	117.8	119.3	115.7	120.8	119.9	119.5	119.8	121.1	120.2	120.3	118.3	118.4	118.9	100.3	100.6	100.8	101.2	101.1	100.7	99.9	100	100.3	100.5	99.2	201.9	120	119.2	201
5:47:21 AM	127	120.5	119.8	117	117.1	115.1	113	107.8	114.1	117.9	119.3	116	120.9	120	119.6	119.9	121.1	120.3	120.3	118.5	118.6	119.2	100.2	100.6	101	101.3	101.2	100.8	99.9	100.1	100.5	100.3	99.2	202.3	120	119	201
5:48:20 AM	128	120.5	119.9	117.2	117.3	115	113.2	108.2	114.4	118.1	119.4	116.2	121	120.1	119.7	120	121.1	120.3	120.4	118.6	118.7	119.3	100.4	100.6	100.8	101.2	101.2	100.8	100	99.9	100.3	100.4	99	201.7	120	119	201
5:49:21 AM	129	120.4	120	117.4	117.4	115.9	114.7	108.6	114.6	118.1	119.4	116.3	121	120.2	119.7	120	121	120.4	120.4	118.7	118.9	119.1	100.5	100.6	100.8	101.1	101	100.7	99.8	99.8	100.3	100.3	99	201.9	120	119	201
5:50:20 AM	130	120.5	120	117.5	117.6	115.7	114.2	108.9	114.8	118.2	119.4	116.5	121	120.2	119.8	120.1	121.1	120.4	120.5	118.8	119	119.2	100.3	100.8	100.8	101.1	101	100.4	99.9	100.1	100.3	100.5	99.1	202.2	120	119	201
5:51:22 AM	131.1	120.5	120.1	117.7	117.7	115.6	113.1	109.3	115	118.4	119.6	116.8	121.1	120.4	119.8	120.2	121.1	120.5	120.5	118.9	119.1	119.4	100.3	100.6	100.8	101.2	100.8	100.5	99.8	100	100.3	100.4	99.2	202.1	120	118.9	201
5:52:20 AM	132	120.5	120.2	117.9	117.8	114.7	104.6	109.6	115.2	118.4	119.6	117	121.2	120.5	119.9	120.4	121.2	120.6	120.6	119.1	119.3	119.5	100.5	100.8	100.8	101.1	100.9	100.7	99.8	100.1	100.3	100.3	99.4	202.1	120	118.8	201
5:53:22 AM	133.1	120.6	120.3	118	118	116.3	114.9	109.9	115.4	118.6	119.7	117.2	121.2	120.6	120.1	120.5	121.2	120.6	120.7	119.2	119.4	119.8	100.3	100.6	100.8	101.1	101	100.7	99.9	100.1	100.3	100.6	99	202.2	120	118.8	201
5:54:21 AM	134	120.6	120.4	118.1	118.1	116.9	115.9	110.3	115.6	118.6	119.7	117.4	121.3	120.6	120.1	120.4	121.2	120.7	120.7	119.3	119.5	119.4	100.4	100.6	100.8	101	101.1	100.7	99.8	100	100.3	100.3	99.1	201.4	120	118.7	201
5:55:20 AM	135	120.4	120.3	118.1	118.1	109.3	109.4	110.6	115.7	118.6	119.6	117.4	121.1	120.5	119.9	120.5	121	120.6	120.7	119.3	119.6	118.3	100.4	100.7	100.8	101.2	101	100.6	100	100	100.2	100.5	99.1	201	120	118.9	201
5:56:22 AM	136.1	120.4	120.3	118.2	118.2	117.1	116.3	110.8	115.8	118.6	119.6	117.5	121	120.5	119.9	120.4	120.8	120.6	120.6	119.3	119.7	118.1	100.2	100.6	100.7	101.3	101.1	100.8	99.9	100.1	100.3	100.4	99.2	201.3	120	119	201
5:57:21 AM	137	120.4	120.3	118.3	118.3	117.3	116.8	111.1	115.9	118.6	119.6	117.6	121	120.4	120	120.4	120.8	120.6	120.6	119.3	119.7	118.5	100.5	100.8	100.6	101.1	101.2	100.7	99.9	100.1	100.3	100.3	99.2	201.6	120	119	201
5:58:22 AM	138.1	120.4	120.3	118.4	118.4	117.1	116.3	111.4	116	118.8	119.6	117.8	121	120.6	120	120.5	120.7	120.6	120.7	119.4	119.9	118.9	100.2	100.7	100.8	101.1	101	100.7	99.8	100.1	100.3	100.4	99.1	201.5	120	118.9	201
5:59:21 AM	139	120.3	120.3	118.5	118.5	117.5	116.8	111.7	116.1	118.8	119.6	117.9	121.1	120.6	120	120.5	120.7	120.6	120.7	119.5	119.9	118.8	100.4	100.7	100.7	101.1	101.1	100.7	100	100.1	100.3	100.5	99	200.6	120	118.8	201
6:00:21 AM	140	120.3	120.3	118.5	118.6	117.7	117.2	111.9	116.2	118.8	119.6	118	121	120.6	120	120.6	120.7	120.6	120.6	119.5	120	118.4	100.4	100.8	100.8	101.2	101.1	100.6	100	100.1	100.3	100.2	99.1	200.7	120	119	201
6:01:22 AM	141.1	120.3	120.4	118.6	118.6	117.8	117.2	112.2	116.3	118.9	119.6	118.1	121	120.6	120	120.6	120.7	120.6	120.7	119.5	120.1	118.8	100.4	100.7	100.8	101.2	101.1	100.7	99.8	100.1	100.3	100.4	98.9	201.1	120	119	201
6:02:21 AM	142	120.3	120.4	118.7	118.7	117.9	117.6	112.5	116.4	119	119.7	118.2	121.2	120.7	120.1	120.7	120.7	120.7	120.7	119.7	120.1	119.2	100.2	100.6	100.8	101.2	101.1	100.7	100	100.1	100.3	100.5	99.1	201	120	118.8	201
6:03:21 AM	143	120.3	120.4	118.8	118.8	118.1	117.8	112.7	116.5	119	119.6	118.4	121.2	120.7	120.1	120.7	120.7	120.7	120.8	119.7	120.2	118.8	100.5	100.9	100.8	101.1	101.1	100.7	99.9	100.1	100.3	100.1	99.2	200.8	120	118.8	201
6:04:21 AM	144	120.3	120.4	118.8	118.8	118.2	117.9	113	116.7	119.1	119.7	118.5	121.2	120.8	120.2	120.7	120.7	120.7	120.7	119.8	120.2	119.1	100.3	100.8	100.8	101.1	100.9	100.6	99.8	100.1	100.6	100.5	99.2	201	120	118.8	201
6:05:21 AM	145	120.3	120.5	118.9	118.9	118.4	118	113.2	116.8	119.1	119.7	118.7	121.3	120.9	120.2	120.7	120.8	120.7	120.8	119.8	120.3	119.2	100.3	100.9	100.6	101.1	101	100.7	99.8	100.1	100.4	100.5	99	201	120	118.7	201
6:06:20 AM	146	120.3	120.5	119	119	118.4	118.1	113.4	116.9	119.2	119.7	118.8	121.3	120.9	120.3	120.8	120.8	120.8	120.9	119.9	120.4	119.4	100.4	100.6	100.7	101.3	101.1	100.7	99.9	100	100.4	100.3	99.1	201	120	118.7	201
6:07:21 AM	147	120.4	120.6	119.1	119.1	118.3	117.9	113.7	117	119.3	119.8	118.9	121.3	121	120.3	120.8	120.9	120.8	120.9	120	120.5	119.5	100.3	100.7	100.8	101	101.3	100.5	99.9	100	100.4	100.5	99.1	201.1	120	118.7	201
6:08:20 AM	148	120.4	120.6	119.2	119.2	118.5	118.2	113.9	117.2	119.3	119.9	119	121.4	121	120.4	120.9	121	120.9	121	120.1	120.6	119.6	100.7	100.8	100.7	101.1	101.1	100.8	99.9	100.1	100.5	100.5	99.2	200.9	120	118.6	201
6:09:20 AM	149	120.3	120.5	119.2	119.2	118.6	118.5	114.1	117.2	119.3	119.8	119	121.3	121	120.3	120.9	120.9	120.8	120.9	120.1	120.6	118.6	100.4	100.6	100.8	101	100.8	100.7	100	100.1	100.4	100.4	99.3	199.8	120	118.7	201
6:10:21 AM	150	120.2	120.5	119.2	119.1	113.9	107.8	114.3	117.2	119.2	119.7	118.9	121	120.8	120.2	120.8	120.6	120.7	120.8	120	120.6	117.6	100.3	100.8	100.7	101.2	100.9	100.7	100	100.1	100.5	100.5	99.1	200	120	119	201
6:11:20 AM	151	120.2	120.4	119.2	119.2	118.8	118.8	114.5	117.2	119.2	119.7	119	121	120.8	120.3	120.8	120.6	120.7	120.7	120	120.6	117.9	100.4	100.7	100.7	101	101.2	100.7	99.9	100	100.3	100.5	99.1	200.3	120	119	201
6:12:22 AM	152.1	120.2	120.4	119.3	119.2	118.6	118.3	114.7	117.3	119.3	119.7	119.1	121	120.8	120.3	120.7	120.5	120.7	120.7	120	120.7	118.4	100.5	100.7	100.8	101.3	101.3	100.7	100	100.1	100.2	100.5	99.1	200.3	120	119	201
6:13:21 AM	153	120.2	120.5	119.3	119.3	118.5	117.8	114.9	117.5	119.4	119.7	119.2	121	120.8	120.3	120.8	120.6	120.7	120.8	120.1	120.7	118.9	100.3	100.7	100.8	101.1	101.3	100.6	99.9	100.1	100.4	100.6	99	200.5	120	119	201
6:13:52 AM	153.6	120.2	120.5	119.3	119.4	117.8	108.9	115	117.5	119.4	119.8	119.2	121.1	120.9	120.3	120.8	120.6	120.8	120.8	120.1	120.7	119.1	100.3	100.7	100.9	101	101.1	100.6	99.8	100.1	100.5	100.4	99.1	200.7	120	118.9	201
6:14:21 AM	154	120.2	120.5	119.4	119.4	118.8	118.7	115.2	117.5	119.5	119.8	119.3	121.1	120.9	120.3	120.8	120.6	120.8	120.9	120.1	120.8	119.1	100.4	100.7	100.8	101.1	101	100.7	99.9	100	100.3	100.5	99	200.2	120	118.9	201
6:15:20 AM	155	120.1	120.5	119.4	119.4	118.9	118.9	115.3	117.6	119.4	119.7	119.3	121	120.8	120.3	120.8	120.5	120.7	120.8	120.1	120.7	118.4	100.3	100.6	100.8	101.1	101	100.7	99.9	100	100.4	100.5	98.9	200.2	120	119	201
6:16:21 AM	156	120.2	120.5	119.4	119.4	119	119.3	115.5	117.7	119.4	119.7	119.4	121.1	120.9	120.3	120.8	120.6	120.7	120.8	120.2	120.8	118.8	100.4	100.7	100.7	101.1	101.2	100.7	99.9	100.3	100.4	100.5	99.1	200.4	120	119	201
6:17:21 AM	157	120.2	120.5	119.5	119.5	119	119.2	115.7	117.8	119.5	119.8	119.5	121.2	120.9	120.5	120.9	120.6	120.8	120.9	120.2	120.8	119.2	100.3	100.6	100.8	101.2	101.3	100.7	99.9	100.1	100.3	100.5	99.2	200.6	120	118.8	201
6:18:22 AM	158.1	120.2	120.5	119.5	119.5	119.1	119.4	115.8	117.8	119.5	119.8	119.6	121.2	121	120.4	120.9	120.6	120.8	120.9	120.3	120.8	118.9	100.2	100.7	100.8	101.1	101.2	100.6	99.9	100	100.3	100.6	99	200.3	120	118.8	201
6:19:21 AM	159	120.2	120.6	119.6	119.5	119.2	119.4	116	117.9	119.5	119.8	119.7	121.2	121	120.4	120.9	120.6	120.8	120.9	120.3	120.9	118.9	100.5	100.9	100.8	101.1	101.2	100.7	99.8	100.1	100.3	100.4	99.1	200.2	120	118.8	201
6:20:22 AM	160.1	120.2	120.6	119.7	119.6	119.3	119.5	116.2	117.9	119.6	119.8	119.7	121.2	121	120.5	120.9	120.7	120.8	120.9	120.3	120.9	119.1	100.2	100.6	100.8	101	101.2	100.8	99.9	100.1	100.5	100.6	99.1	200.4	120	118.8	201
6:21:22 AM	161.1	120.3	120.6	119.7	119.7	119.3	119.5	116.4	118	119.6	119.9	119.8	121.3	121	120.5	121	120.8	120.9	121	120.4	121	119.3	100.3	100.7	100.8	101	101	100.7	100	100.1	100.4	100.6	99.1	200.5	120	118.7	201
6:22:20 AM	162	120.4	120.7	119.7	119.7	117.5	115.2	116.5	118.1	119.7	119.9	119.9	121.4	121.1	120.6	121.1	120.9	121	121.1	120.5	121.1	119.6	100.4	100.8	100.8	101.1	101.1	100.7	99.9	100.1	100.4	100.5	99	200.6	120	118.6	201
6:23:20 AM	163	120.4	120.7	119.8	119.8	119.4	119.4	116.7	118.2	119.8	120	120	121.5	121.2	120.7	121.1	121	121	121.1	120.5	121.1	119.8	100.5	100.7	100.7	101.3	101	100.7	99.8	100.1	100.6	100.5	99.3	200.1	120	118.4	201
6:24:22 AM	164.1	120.3	120.7	119.8	119.8	119.5	119.6	116.8	118.2	119.7	120	119.9	121.3	121.1	120.5	121	120.8	121	121.1	120.6	121.1	118.6	100.3	100.6	100.8	101.1	101.2	100.7	99.9	100.1	100.3	100.3	99	199.2	120	118.6	201
6:25:20 AM	165	120.1	120.6	119.7	119.7	113.4	105.8	116.9	118.2	119.6	119.8	119.9	121.1	120.9	120.4	121	120.5	120.9	120.9	120.5	121	117.5	100.5	100.9	100.8	101.2	101	100.7	99.8	100	100.5	100.3	99.1	199	120	118.8	201
6:26:22 AM	166.1	120.1	120.5	119.7	119.7	117.4	115.2	117	118.2	119.6	119.8	119.9	121.1	120.9	120.4	120.9	120.4	120.8	120.8	120.4	121	117.8	100.4	100.8	100.8	101.2	101.2	100.7	99.9	100.1	100.5	100.4	99.1	199.7	120	118.9	201
6:27:22 AM	167.1	120.1	120.5	119.7	119.7	119.5	119.8	117.2	118.2	119.7	119.8	120	121.1	120.9	120.4	120.9	120.5	120.8	120.9	120.4	121.1	118.3	100.5	100.6	100.8	101.3	101.1	100.7	99.9	100.1	100.4	100.6	99.1	199.9	120	118.9	201
6:28:20 AM	168	120.1	120.6	119.8	119.8	116.7	113.7	117.3	118.4	119.7	119.8	120	121.1	120.9	120.4	120.9	120.5	120.8	120.9	120.5	121.1	118.8	100.6	100.7	100.7	101	101.1	100.7	100	100.1	100.5	100.4	99	201.1	120	118.9	201
6:28:54 AM	168.6	120.2	120.6	119.8	119.8	113	105.3	117.3	118.4	119.7	119.8	120.1	121.1	121	120.5	121	120.5	120.8	120.9	120.5	121.1	119	100.4	100.7	100.6	101	101.2	100.7	99.7	100	100.5	100.5	99.1	201.1	120	118.9	201
6:29:21 AM	169	120.2	120.7	119.9	119.9	112.5	104.1	117.4	118.4	119.8	119.9	120.1	121.2	121	120.7	121.1	120.7	120.9	121.1	120.6	121.2	120	100.5	100.7	101	101.2	100.8	100.7	99.9	100.1	100.7	100.5	99	211.2	120	118.8	213.2
6:30:22 AM	170.1	120.3	120.7	120	120.1	116.3	113.4	117.5	118.2	119.5	119.9	120.2	121.1	121.1	120.7	121	120.8	121.1	121.1	120.8	121.4	119.9	100.5	100.8	100.8	101.3	101.3	100.6	100	100.1	100.5	100.5	99.1	242.2	120	118.6	243.9
6:31:21 AM	171	120.2	120.7	120	120	119.2	118.7	117.5	117.9	119.1	119.7	120.1	121	120.9	120.6	121	120.6	121.1	121.1	120.8	121.5	118.6	100.5	100.8	100.7	101.2	101.3	100.7	100	100.2	100.3	100.5	99.1	271.9	120	118.5	273.3
6:32:22 AM	172.1	120.1	120.6	120	120	119.4	119.7	117.4	117.7	118.7	119.5	120	120.8	120.7	120.5	120.9	120.4	121	121	120.7	121.5	117.6	100.5	100.9	100.8	101.3	101.2	101.1	100	100.2	100.7	100.6	99.2	303.9	120	118.5	304
6:33:22 AM	173.1	120.1	120.6	120	120	118.4	118.7	117.4	117.5	118.7	119.5	120	120.9	120.8	120.5	120.9	120.4	121	121	120.7	121.5	118.2	100.3	100.9	100.8	101.2	101.4	101	100	100.3	100.7	100.6	99	333.8	120	118.5	333.6
6:34:20 AM	174	120.1	120.6	120.1	120	119.3	119.4	117.6	117.6	118.7	119.4	120	120.9	120.8	120.5	120.9	120.4	120.9	121	120.7	121.4	118.3	100.3	100.6	100.9	101.2	101.6	100.9	100.1	100.3	100.9	100.6	98.9	362.8	120	118.6	363
6:34:54 AM	174.6	120.1	120.6	120.1	120.1	119.3	119.8	117.6	117.5	118.6	119.4	120	120.9	120.7	120.5	120.9	120.4	120.9	121	120.6	121.3	118.2	100.3	101	100.9	101.2	101.3	101.1	100.4	100.2	100.7	100.7	99.1	380.3	120	118.7	379.9
6:35:20 AM	175	120.1	120.6	120.1	120.1	119.2	119.8	117.6	117.5	118.6	119.4	120.1	121	120.9	120.5	120.9	120.4	120.8	120.9	120.6	121.3	118.6	100.6	100.8	100.9	101.2	101.4	101	100.2	100.4	100.8	100.8	99.1	393.4	120.4	119.4	393.1
6:36:20 AM	176	120.2	120.5	120.1	120.1	119.2	119.8	117.6	117.7	118.7	119.4	120.2	121.1	120.9	120.6	120.9	120.5	120.8	120.9	120.6	121.3	118.9	100.5	100.9	100.8	101.5	101.5	101.2	100.3	100.5	100.8	100.7	99.1	404.6	121.4	121.5	401
6:37:21 AM	177	120.2	120.6	120.1	120.1	118.4	117.9	117.7	117.8	118.8	119.5	120.4	121.3	121.1	120.7	121	120.7	120.7	120.9	120.6	121.3	119.7	100.7	100.9	101	101.3	101.6	101.1	100.1	100.5	100.8	100.8	99	405.5	122.4	123.4	401
6:38:20 AM	178	120.4	120.7	120.2	120.2	110.4	101.5	117.8	118	119	119.7	120.6	121.6	121.3	120.9	121.1	121	120.9	121.1	120.8	121.3	120.7	100.4	100.9	100.8	101.2	101.5	101.1	100.3	100.5	100.7	100.9	98.9	406.6	123.4	125.2	401
6:39:22 AM	179.1	120.7	120.9	120.4	120.4	116.7	113.3	118	118.3	119.3	120	120.8	122.1	121.7	121.2	121.4	121.6	121.1	121.3	120.9	121.5	121.9	100.5	100.8	100.9	101.3	101.4	101.2	100.2	100.4	101	100.7	99.2	406.4	124.4	126.8	401
6:40:20 AM	180	121	121.2	120.6	120.6	119.1	120	118.2	117.7	119.6	120.3	121.2	122.7	122.2	121.6	121.8	122.2	121.4	121.5	121.2	121.7	123.2	100.6	100.8	100.8	101.2	101.5	101.1	100.2	100.5	100.8	100.8	99.2	403.2	125.4	128.1	401
6:41:22 AM	181.1	121.6	121.6	121	121	119.7	120.3	118.4	119	120.1	120.8	121.6	123.5	122.8	122.1	122.3	123.1	121.9	122.1	121.6	122.1	125	100.3	100.8	100.8	101.1	101.6	101.1	100.4	100.6	100.9	100.7	98.9	401.8	126.4	129.4	401
6:42:22 AM	182.1	122.3	122.2	121.4	121.5	119.9	120.6	118.8	119.5	120.6	121.5	122.2	124.4	123.8	122.9	122.9	124.3	122.5	122.7	122.2	122.5	127.2	100.6	100.9	100.9	101.3	101.2	101.2	100.2	100.6	100.8	100.8	99	401.1	127.4	130.5	401
6:43:20 AM	183	123	122.9	121.9	122	120.4	121	119.2	118.7	121.3	122.2	122.9	125.7	124.9	123.8	123.6	125.6	123.2	123.4	122.9	123.1	129.4	100.6	100.8	100.9	101.1	101.3	101.3	100.3	100.7	100.7	100.6	99.3	400.9	128.4	131.1	401
6:44:20 AM	184	124.1	123.8	122.6	122.9	120.9	121.5	119.7	119.9	122.1	123.2	123.7	127	126.2	124.8	124.6	127	124.1	124.4	123.8	123.8	131.4	100.4	100.7	101	101.4	101.6	101.1	100.3	100.5	100.9	100.7	99	401	129.4	131.8	401
6:45:22 AM	185.1	125.2	124.8	123.5	123.7	121.8	122	120.2	121.1	123.1	124.3	124.7	128.6	127.5	125.9	125.6	128.7	125	125.4	124.7	124.6	133.5	100.4	100.9	100.8	101.3	101.4	100.8	100.1	100.5	101	100.7	98.8	400.9	130.4	132.3	401
6:46:23 AM	186.1	126.3	125.7	124.4	124.6	122.4	122.6	120.7	121.6	123.9	125.4	125.6	130	128.7	127	126.7	130.2	126.1	126.4	125.6	125.4	135.1	100.7	100.8	100.8	101.3	101.3	101	100.2	100.5	101.1	100.8	99.4	400.7	131.4	132.9	401
6:47:21 AM	187	127.5	126.7	125.1	125.4	123.2	123.3	121.3	122.1	124.9	126.3	126.6	131.3	129.9	128	127.6	131.6	127.2	127.4	126.6	126.3	136.7	100.4	100.8	100.9	101.3	101.2	101	100.2	100.4	100.9	100.8	99.2	400.7	132.4	133.5	401
6:48:21 AM	188	128.6	127.7	126	126.3	123.8	123.9	121.8	120.6	125.8	127.4	127.5	132.5	131.1	129.1	128.7	132.9	128.2	128.5	127.6	127.2	137.6	100.7	100.9	100.7	101.3	101.5	101	100.1	100.4	100.9	100.7	99.1	400.8	133.4	134.3	401
6:49:22 AM	189.1	129.7	128.7	126.8	127.3	124.6	124.6	122.4	120.3	126.6	128.4	128.5	133.7	132.3	130.1	129.7	134.2	129.2	129.5	128.6	128.1	138.2	100.5	100.9	100.8	101.2	101.3	101.2	100.2	100.5	101	100.6	99.1	400.8	134.4	135.2	401
6:50:21 AM	190	130.7	129.6	127.6	128	125.3	125.2	123	121	127.5	129.4	129.3	134.7	133.3	131	130.6	135.2	130.2	130.4	129.5	128.9	138.6	100.4	100.7	100.8	101.2	101.5	101.3	100.2	100.6	100.9	100.7	99.2	400.8	135.4	136.1	401
6:51:20 AM	191	131.6	130.4	128.4	128.8	126	125.7	123.6	121.7	128.3	130.3	130.1	135.6	134.1	131.9	131.5	136.1	131.1	131.3	130.3	129.8	138.8	100.6	100.9	100.8	101.4	101.6	101.1	100.2	100.7	100.9	101	99.1	400.7	136.4	137.1	401
6:52:20 AM	192	132.5	131.3	129.2	129.6	126.6	126.4	124.2	122.2	129.1	131.2	130.9	136.4	134.9	132.7	132.3	136.8	131.9	132.1	131.1	130.5	139	100.5	100.8	100.8	101.1	101.5	101	100.3	100.6	100.8	100.8	99.1	400.8	137.4	138.4	401
6:53:21 AM	193	133.3	132	130	130.3	127.4	127.1	124.8	122.7	129.8	131.9	131.6	137	135.6	133.4	132.9	137.6	132.7	132.9	131.9	131.3	139.2	100.4	100.7	100.8	101.2	101.6	101.1	100.1	100.5	100.9	100.8	99.2	401	138.4	139.8	401
6:54:21 AM	194	134.1	132.8	130.7	131	127.9	127.7	125.4	123.1	130.5	132.7	132.3	137.7	136.3	134.1	133.7	138.1	133.4	133.5	132.6	132	139.4	100.5	100.8	100.9	101.1	101.6	100.9	100.3	100.4	101.1	100.9	99.1	401.1	139.4	141.1	401
6:55:20 AM	195	134.8	133.5	131.5	131.7	128.3	128.3	126	123.6	131.2	133.3	133	138.3	136.9	134.9	134.4	138.7	134.2	134.3	133.3	132.7	139.8	100.5	100.7	100.8	101.2	101.5	101.2	100.3	100.6	100.8	100.7	99	401.2	140.4	142.5	401
6:56:21 AM	196	135.5	134.2	132.2	132.3	129.2	129	126.5	124	131.9	134.1	133.7	138.9	137.6	135.6	135.1	139.3	134.9	135	134	133.4	140.5	100.3	100.8	101	101.2	101.3	101	100.2	100.5	100.9	100.9	99.1	401.4	141.4	143.9	401
6:57:20 AM	197	136.2	134.9	132.8	133	129.8	129.5	127.1	124.5	132.6	134.8	134.3	139.6	138.2	136.2	135.7	139.9	135.5	135.7	134.6	134.1	141.5	100.4	100.9	100.9	101.2	101.5	101	100.2	100.5	100.9	100.8	99	401.2	142.4	145.1	401
6:58:22 AM	198.1	137	135.8	133.7	133.8	130.4	130.2	127.8	125.3	133.4	135.6	135.1	140.6	139.2	137	136.5	140.6	136.3	136.4	135.4	134.8	142.7	100.4	100.9	100.8	101.2	101.6	101	100.3	100.4	101	100.9	99	401.3	143.4	146.3	401
6:59:20 AM	199	137.9	136.6	134.3	134.5	131.3	130.7	128.5	127.4	134.1	136.3	135.9	141.5	140.1	137.9	137.3	141.6	137.2	137.4	136.2	135.6	144.4	100.4	100.8	100.8	101.2	101.6	101	100.3	100.5	101	100.7	99	401.2	144.4	147.4	401
7:00:20 AM	200	138.9	137.6	135.3	135.5	132.2	131.4	129.2	129.1	135	137.4	136.8	142.7	141.2	139	138.3	142.8	138.2	138.3	137	136.5	146.1	100.6	101	100.8	101.2	101.4	101.1	100.2	100.6	101.1	100.6	99.2	401.2	145.4	148.2	401
7:01:22 AM	201.1	140	138.6	136.3	136.4	132.9	132.3	129.9	131	136.1	138.4	137.7	143.9	142.4	140	139.4	144.2	139.2	139.2	138	137.5	148.3	100.5	100.8	100.8	101.4	101.4	101.1	100.2	100.5	101.1	100.7	99.1	400.8	146.4	149	401
7:02:20 AM	202	141.1	139.7	137.4	137.5	133.8	133.1	130.7	133.1	137.1	139.5	138.7	145.2	143.7	141.2	140.5	145.5	140.4	140.3	139.1	138.5	150.1	100.4	100.9	100.8	101.1	101.5	101.2	100.2	100.5	101	100.7	99.2	400.8	147.4	149.6	401
7:03:22 AM	203.1	142.4	140.8	138.4	138.6	134.7	134.1	131.6	133.9	138.1	140.6	139.8	146.6	145	142.5	141.7	147	141.5	141.5	140.3	139.5	151.8	100.7	100.9	100.8	101.2	101.5	101	100.2	100.7	101.1	100.8	99.1	400.7	148.4	150.3	401
7:04:22 AM	204.1	143.6	141.9	139.4	139.6	135.8	135	132.4	134.7	139.3	141.8	140.9	148	146.2	143.6	142.8	148.4	142.7	142.7	141.4	140.7	153.1	100.8	100.9	100.8	101	101.6	101	100.2	100.5	101.1	100.7	99.2	400.9	149.4	150.9	401
7:05:20 AM	205	144.8	143.1	140.5	140.7	136.6	135.9	133.2	129.6	140.3	143	142	149.2	147.4	144.7	143.9	149.7	143.9	143.8	142.4	141.6	154	100.5	101	101	101.1	101.6	100.9	100.4	100.5	101.1	100.8	99.2	400.9	150.4	151.7	401
7:06:20 AM	206	145.9	144.2	141.6	141.7	137.7	136.9	134	130.4	141.4	144.1	143	150.3	148.6	145.8	145.1	150.8	145	144.9	143.5	142.7	155.1	100.5	100.7	100.7	101.4	101.4	101.1	100.2	100.7	101.2	100.7	99	400.8	151.4	152.5	401
7:07:22 AM	207.1	147	145.3	142.5	142.7	138.8	137.8	134.9	133.4	142.4	145.2	144.1	151.4	149.6	146.8	146.1	151.9	146.1	146	144.6	143.8	155.7	100.5	100.7	100.8	101.4	101.6	101	100.3	100.5	101.1	100.7	99	400.7	152.4	153.4	401

7:08:20 AM	208	148.1	146.3	143.4	143.7	139.8	138.7	135.7	132.7	143.4	146.1	145	152.4	150.6	147.8	147.1	152.9	147	146.9	145.5	144.8	156.1	100.6	101.1	100.9	101.2	101.3	101.1	100.3	100.5	101	100.7	99	401	153.4	154.4	401
7:09:22 AM	209.1	149.1	147.3	144.5	144.6	140.6	139.6	136.5	133.1	144.4	147.2	146	153.3	151.7	148.8	148.1	153.8	147.9	147.9	146.5	145.7	156.5	100.6	100.9	101	101.4	101.3	101.1	100.3	100.6	101	100.7	99	401	154.4	155.5	401
7:10:22 AM	210.1	150.1	148.3	145.5	145.5	141.3	140.4	137.4	134	145.3	148.1	146.9	154.1	152.5	149.7	149.1	154.6	149	148.8	147.4	146.6	156.9	100.6	100.9	100.8	101.2	101.5	101	100.2	100.5	101	100.7	99.1	401	155.4	156.7	401
7:11:20 AM	211	150.9	149	146.3	146.4	142.3	141.4	138.2	134.6	146.2	148.9	147.7	154.8	153.2	150.5	149.9	155.3	149.8	149.6	148.2	147.4	157.2	100.4	100.9	101	101.2	101.6	101.2	100.2	100.5	101.1	100.7	99	401.1	156.4	158	401
7:12:22 AM	212.1	151.7	149.9	147.2	147.1	143.1	142.1	139	134.9	147	149.7	148.6	155.5	154	151.4	150.7	155.9	150.7	150.5	149	148.4	157.7	100.5	101	101	101.1	101.5	100.9	101.1	100.4	101.1	100.7	99.1	401.2	157.4	159.3	401
7:13:21 AM	213	152.5	150.8	148.1	148	143.9	143	139.8	133.3	147.8	150.5	149.4	156.3	154.7	152.1	151.5	156.6	151.5	151.3	149.8	149.1	158.3	100.5	100.9	100.9	101.2	101.6	101	100.4	100.5	101.2	100.7	99.1	401.2	158.4	160.5	401
7:14:22 AM	214.1	153.3	151.6	148.9	148.8	144.7	143.8	140.6	134.2	148.6	151.2	150.3	157	155.4	153	152.3	157.2	152.3	152.2	150.7	150	159.1	100.6	101.2	100.9	101.1	101.6	101.1	100.1	100.6	101	100.7	99.1	401.2	159.4	161.9	401
7:15:21 AM	215	154.1	152.5	149.7	149.6	145.6	144.6	141.3	134.6	149.4	152.1	151.2	157.8	156.2	153.8	153.1	158	153.3	153	151.5	150.8	160.1	100.6	100.9	100.8	101	101.6	100.9	100.3	100.6	101.3	101	99.1	401.2	160.4	163.1	401
7:16:21 AM	216	155	153.3	150.6	150.5	146.5	145.6	142.2	135.5	150.3	152.9	152.1	158.7	157.1	154.6	154	158.9	154	153.9	152.3	151.7	161.4	100.4	100.9	100.9	101.1	101.5	100.9	100.1	100.7	101	100.8	99	401.3	161.4	164.1	401
7:17:22 AM	217.1	156	154.3	151.4	151.5	147.3	146.5	143	136.6	151.3	153.9	153	159.7	158.1	155.7	155	160	155	154.8	153.2	152.6	163.1	100.5	100.9	101	101.1	101.5	100.9	100.4	100.5	101.3	100.7	99.1	401.1	162.4	165.1	401
7:18:21 AM	218	157	155.4	152.6	152.5	148.3	147.5	143.9	138.7	152.3	154.9	154.1	160.8	159.2	156.7	156	161.1	156.2	155.8	154.2	153.5	164.8	100.4	101.1	100.8	101.2	101.4	101.1	100.2	100.6	101.1	100.9	99	401	163.4	166	401
7:19:21 AM	219	158.1	156.5	153.6	153.5	149.2	148.5	144.8	140.6	153.4	156	155	162.2	160.5	157.9	157.1	162.4	157.3	156.9	155.2	154.7	166.6	100.4	101	100.8	101.1	101.5	101.1	100.3	100.6	101.1	100.7	99.1	400.7	164.4	166.6	401
7:20:21 AM	220	159.2	157.5	154.6	154.6	150.5	149.5	145.7	143.8	154.4	157.2	156.2	163.7	161.9	159.2	158.3	163.9	158.3	158	156.3	155.9	168.4	100.7	101.1	101	101.1	101.5	101	100.3	100.5	101.1	100.7	99.1	400.8	165.4	167.2	401
7:21:21 AM	221	160.4	158.7	155.5	155.7	151.2	150.6	146.8	149.8	155.5	158.3	157.3	164.9	163.2	160.3	159.3	165.1	159.4	159	157.3	156.8	169.8	100.6	100.9	100.9	101	101.5	100.9	100.3	100.3	101.1	100.8	99.2	400.9	166.4	167.9	401
7:22:20 AM	222	161.6	159.8	156.5	156.8	152.3	151.6	147.7	151.4	156.6	159.5	158.4	166.1	164.3	161.4	160.3	166.4	160.6	160.1	158.4	158	170.7	100.6	100.8	100.7	101.1	101.4	100.9	100.2	100.4	101.1	100.6	99.1	400.8	167.4	168.8	401
7:23:21 AM	223	162.7	160.9	157.5	157.9	153.5	152.8	148.7	151.3	157.8	160.7	159.5	167.2	165.5	162.6	161.5	167.6	161.6	161.2	159.4	159.1	171.8	100.5	101.1	101	101	101.6	101.1	100.6	100.7	101.3	101	99.3	401	168.4	169.6	401
7:24:21 AM	224	163.8	162.1	158.8	159.1	154.5	153.7	149.6	151.8	158.9	161.8	160.6	168.3	166.6	163.7	162.6	168.7	162.9	162.3	160.5	160.1	172.4	100.7	100.9	100.9	101.1	101.6	101.2	100.3	100.5	101.1	100.9	98.9	400.8	169.4	170.5	401
7:25:21 AM	225	164.9	163.1	159.7	160.1	155.6	154.7	150.6	152.2	159.9	162.8	161.6	169.2	167.5	164.8	163.6	169.7	163.9	163.4	161.6	161.2	173	100.7	100.9	100.8	101.2	101.3	101	100.2	100.6	101.1	100.8	99.1	400.8	170.4	171.6	401
7:26:21 AM	226	165.9	164.1	160.8	161.2	156.5	155.7	151.6	152.6	160.9	163.8	162.7	170.2	168.6	165.7	164.6	170.6	165	164.4	162.5	162.1	173.6	100.5	101	101	101	101.6	100.9	100.4	100.8	101.3	100.8	99.2	401	171.4	172.6	401
7:27:21 AM	227	166.8	165	161.8	162	157.5	156.6	152.5	151.7	161.8	164.7	163.5	171	169.4	166.6	165.6	171.4	165.9	165.4	163.5	163.1	174	100.5	101	100.8	101.1	101.5	100.9	100.4	100.8	101.1	100.7	99.1	400.7	172.4	173.8	401
7:28:20 AM	228	167.7	165.9	162.8	162.9	158.2	157.6	153.3	154.7	162.7	165.5	164.4	171.8	170.2	167.5	166.4	172.2	166.8	166.3	164.4	164	174.4	100.7	100.9	101	101.1	101.4	101	100.3	100.7	101.3	100.9	99.2	401	173.4	175	401
7:29:21 AM	229	168.5	166.8	163.5	163.8	159.3	158.5	154.2	155.7	163.6	166.4	165.3	172.6	171	168.3	167.3	172.9	167.7	167.2	165.2	165	174.9	100.5	101.1	100.9	101	101.5	101	100.3	100.6	101.3	100.7	99.1	401.2	174.4	176.2	401
7:30:21 AM	230	169.3	167.6	164.4	164.7	160	159.4	155.1	156.5	164.5	167.2	166.2	173.4	171.7	169.1	168.1	173.6	168.5	167.9	166.1	165.9	175.6	100.5	101.1	101	101.1	101.5	100.9	100.2	100.5	101.1	100.7	99	401	175.4	177.4	401
7:31:21 AM	231	170.1	168.5	165.2	165.5	160.8	160.2	156	156.5	165.3	168	167	174.1	172.5	170	169	174.3	169.4	168.7	166.9	166.7	176.4	101.6	101	100.8	101.1	101.4	101.1	100.1	100.4	101.1	101	99.1	401.2	176.4	178.7	401
7:32:21 AM	232	171	169.3	166.1	166.3	161.7	161.2	156.8	156.3	166.1	168.9	168	175	173.3	170.9	169.8	175.2	170.2	169.6	167.8	167.6	177.3	101.4	101	100.8	101.1	101.6	101.1	100.2	100.6	101.2	100.9	99.3	401.2	177.4	179.9	401
7:33:21 AM	233	171.8	170.2	166.9	167.3	162.6	162.1	157.7	160.6	167.1	169.8	168.8	175.9	174.3	171.8	170.8	176.1	171	170.5	168.6	168.5	178.6	100.5	101.1	100.9	101	101.6	101	100.4	100.6	101.2	100.7	98.9	401.2	178.4	180.9	401
7:34:20 AM	234	172.8	171.2	167.9	168.3	163.6	163	158.7	160	168	170.7	169.8	176.8	175.2	172.8	171.7	177	172	171.5	169.5	169.5	180.1	100.6	101.1	100.9	101.1	101.4	101	100.4	100.4	101.3	100.9	99.2	401	179.4	182.1	401
7:35:21 AM	235	173.9	172.3	169.2	169.2	164.7	164	159.6	162.6	169.1	171.8	170.8	177.9	176.4	173.8	172.8	178.2	173	172.5	170.5	170.4	181.7	100.6	100.9	100.9	101.2	101.6	101	100.4	100.6	101.2	100.8	98.9	401	180	182.2	401
7:36:21 AM	236	175	173.3	170.2	170.3	165.7	165	160.7	159.5	170.1	172.9	171.9	179.2	177.5	175	173.8	179.4	174.2	173.7	171.6	171.5	183.2	100.5	100.9	101	101.1	101.6	101	100.3	100.7	101.2	100.6	98.9	400.8	180	180.9	401
7:37:20 AM	237	176	174.4	171.1	171.3	166.7	166.1	161.6	158.8	171.2	173.9	172.9	180.3	178.6	176	174.8	180.6	175.2	174.8	172.6	172.5	184.5	100.8	101.1	100.9	101.2	101.6	101	100.4	100.8	101.3	100.7	99.1	400.7	180	179.8	401
7:38:21 AM	238	177	175.3	172.1	172.2	167.7	167	162.6	162.9	172.2	174.9	173.8	181.2	179.6	177	175.7	181.6	176.2	175.6	173.4	173.4	184.6	100.6	101.1	101	101.2	101.5	101.1	100.3	100.6	101.5	101	99.2	399.6	180	178.8	401
7:39:20 AM	239	177.8	176.2	173	173	168.6	167.9	163.5	162.8	173.1	175.7	174.7	182	180.3	177.7	176.6	182.3	176.9	176.5	174.3	174.3	184.3	100.6	101	101	101	101.3	101.1	100.4	100.7	101.4	100.7	99.1	399.3	180	178.1	401
7:40:22 AM	240.1	178.3	176.8	173.7	173.7	169.4	168.7	164.3	163.2	173.6	176.2	175.3	182.1	180.6	178.1	177.1	182.3	177.5	177.2	175	175	182	100.5	101	100.9	101	101.5	101	100.2	100.5	101.4	100.8	99.1	396	180	177.9	401
7:41:21 AM	241	178.3	177	174.1	174	169.7	169.3	164.9	163.2	173.8	176.3	175.6	181.7	180.2	178	177.3	181.7	177.7	177.3	175.4	175.3	178.8	100.4	101.1	100.8	101	101.3	101	100.2	100.6	101.5	100.7	99.2	395	180	178.3	401
7:42:20 AM	242	178.6	177.3	174.5	174.3	170.2	169.9	165.5	163.2	174.1	176.5	175.9	181.5	180.1	178.2	177.5	181.4	177.8	177.6	175.7	175.8	179	100.6	101.1	100.8	101	101.3	100.9	100.4	100.9	101.5	100.8	99.1	398.2	180	178.5	401
7:43:22 AM	243.1	178.7	177.5	174.9	174.6	170.6	170.5	166.2	163.5	174.5	176.7	176.2	181.3	180.1	178.4	177.7	181.2	178	177.8	176	176.1	179	100.6	101.1	100.8	101	101.6	101	100.4	100.6	101.2	100.8	99.1	399.4	180	178.7	401
7:44:20 AM	244	178.8	177.8	175.3	175	171.1	171	166.7	162.1	174.8	176.9	176.6	181.2	180.1	178.5	177.9	181.1	178.2	177.9	176.2	176.5	179	100.6	101.1	100.8	101.2	101.4	100.8	100.3	100.7	101.1	100.9	99.1	401	180	178.8	401
7:45:20 AM	245	178.9	178	175.6	175.2	171.4	171.4	167.3	162	175.1	177	176.8	181.2	180.2	178.6	178.1	180.9	178.3	178.1	176.4	176.7	179	100.5	101.1	100.9	101	101.3	100.9	100.3	100.6	101.5	100.8	98.9	400.7	180	178.8	401
7:46:21 AM	246	179	178.2	175.8	175.5	171.7	172	167.9	162.2	175.4	177.2	177.1	181	180.1	178.8	178.3	180.8	178.5	178.2	176.7	177	179	100.7	101	101	101	101.5	101	100.4	100.7	101.7	101	99.1	400.7	180	179	401
7:47:20 AM	247	179.1	178.3	176.1	175.7	172.1	172.4	168.4	162.4	175.7	177.2	177.3	181.1	180.2	178.9	178.4	180.8	178.6	178.4	176.9	177.3	179.1	100.7	101.1	101	101	101.4	100.9	100.4	100.6	101.4	100.9	99.1	400.8	180	179	401
7:48:20 AM	248	179.2	0	176.3	176	172.3	172.8	168.9	162.5	175.9	177.4	177.6	181.1	180.3	179	178.6	180.7	178.7	178.5	177.1	177.5	179.1	100.7	101	100.9	101	101.4	100.8	100.3	100.8	101.4	100.8	99.3	400.7	180	178.9	401
7:49:22 AM	249.1	179.2	0	176.6	176.2	172.5	173.2	169.4	163	176.1	177.5	177.8	181.1	180.4	179.1	178.7	180.7	178.8	178.7	177.2	177.7	179.2	100.7	101	101	101	101.5	100.7	100.3	100.5	101.5	100.8	99	400.7	180	178.9	401
7:50:20 AM	250	179.3	0	176.8	176.4	172.9	173.5	169.9	163.1	176.3	177.6	178	181.1	180.4	179.2	178.8	180.7	178.9	178.8	177.5	177.9	179.3	100.5	100.9	100.8	101	101.3	101	100.4	100.8	101.6	100.8	99.3	402	180	178.9	401
7:51:20 AM	251	179.4	0	177	176.6	173.3	173.9	170.3	164.1	176.5	177.8	178.2	181.2	180.5	179.3	179	180.7	179.1	178.9	177.6	178.1	179.3	100.5	101	100.8	101	101.3	100.9	100.3	100.6	101.7	100.8	99.1	402	180	178.8	401
7:52:22 AM	252.1	179.4	0	177.1	176.8	173.4	174.2	170.7	164.3	176.8	177.8	178.5	181.2	180.5	179.4	179.1	180.7	179.2	179.1	177.8	178.3	179.4	100.6	101	100.8	101	101.6	101.1	100.4	100.7	101.4	100.7	99.2	402	180	178.8	401
7:53:21 AM	253	179.5	0	177.4	177	173.5	174.5	171.1	164.4	176.9	178	178.6	181.2	180.6	179.5	179.2	180.7	179.2	179.2	177.9	178.4	179.4	100.9	101	100.8	101	101.4	100.9	100.6	100.6	101.4	100.8	99.2	402	180	178.8	401
7:54:20 AM	254	179.5	0	177.6	177.1	173.9	174.8	171.5	164.5	177.1	178.1	178.8	181.2	180.7	179.6	179.3	180.7	179.3	179.3	178.1	178.6	179.5	100.6	101	100.8	100.9	101.5	100.9	100.5	100.3	101.8	100.8	99.1	402	180	178.8	401
7:55:22 AM	255.1	179.6	0	177.7	177.3	174.1	175.1	171.9	164.7	177.3	178.2	179	181.3	180.7	179.7	179.4	180.8	179.4	179.4	178.3	178.8	179.5	100.5	101	101.1	101	101.5	100.8	100.4	100.7	101.5	100.7	98.9	401.7	180	178.8	401
7:56:20 AM	256	179.7	0	177.9	177.4	174.3	175.4	172.3	164.7	177.4	178.2	179.1	181.3	180.8	179.7	179.6	180.8	179.6	179.5	178.4	178.9	179.5	100.4	101	100.8	101	101.6	100.9	100.5	100.8	101.7	100.9	99	401.9	180	178.7	401
7:57:20 AM	257	179.7	0	178	177.6	174.4	175.6	172.6	164.9	177.5	178.3	179.2	181.3	180.8	179.8	179.6	180.8	179.6	179.6	178.6	179	179.5	100.7	101.2	100.8	101	101.4	100.8	100.5	100.7	101.6	100.9	99	401.9	180	178.7	401
7:58:22 AM	258.1	179.7	0	178.2	177.7	174.5	175.8	172.9	165	177.6	178.4	179.4	181.3	180.8	179.9	179.7	180.8	179.7	179.8	178.7	179.1	179.6	100.6	101	101	101	101.5	100.9	100.5	100.8	101.4	101	99.1	401.6	180	178.7	401
7:59:21 AM	259	179.8	0	178.2	177.8	174.8	176	173.2	165.4	177.8	178.5	179.5	181.4	180.8	179.9	179.8	180.8	179.8	179.8	178.8	179.3	179.5	100.6	100.9	101	100.9	101.6	101	100.4	100.6	101.8	101.1	99.2	401.6	180	178.7	401
8:00:22 AM	260.1	179.8	0	178.4	177.9	174.9	176.3	173.5	165.5	177.9	178.5	179.6	181.4	180.9	180	179.9	180.8	179.8	179.9	179	179.4	179.6	100.9	101.1	101.1	101	101.4	100.8	100.5	100.6	101.7	100.7	98.9	401.6	180	178.6	401
8:01:22 AM	261.1	179.8	0	178.5	178	175.1	176.5	173.8	165.4	178	178.6	179.7	181.4	180.9	180.1	179.9	180.9	179.9	179.9	179	179.5	179.6	100.5	101.2	100.9	101	101.5	100.9	100.3	100.5	101.6	101	99.1	401.2	180	178.6	401
8:02:20 AM	262	179.7	0	178.5	177.9	174.9	176.3	174	165.8	177.9	178.4	179.6	181.1	180.7	179.8	179.8	180.5	179.7	179.8	179	179.4	178	100.7	101	100.9	101	101.3	100.8	100.3	100.9	101.7	100.7	99.4	399.9	180	178.9	401
8:03:22 AM	263.1	179.5	0	178.5	177.9	175	176.6	174.2	168.3	178	178.4	179.7	180.9	180.5	179.7	179.7	180.2	179.7	179.8	179	179.5	178	100.8	101.2	101	101	101.5	100.9	100.4	100.9	101.8	100.9	99.2	400	180	179.1	401
8:04:21 AM	264	179.4	0	178.5	178	175.1	176.8	174.4	168.4	178	178.3	179.6	180.8	180.4	179.7	179.6	180.1	179.6	179.7	179	179.4	178	100.7	101.1	101	100.9	101.2	100.9	100.4	100.7	101.6	101	99.1	400.1	180	179.2	401
8:05:22 AM	265.1	179.4	0	178.5	178	175.2	176.9	174.6	168.4	178	178.3	179.6	180.7	180.4	179.7	179.6	180	179.5	179.7	179	179.5	178.2	100.5	101.1	100.8	100.9	101.4	100.9	100.2	100.5	101.7	101.1	99	400.1	180	179.3	401
8:06:22 AM	266.1	179.4	0	178.5	178	175.3	177	174.8	168.4	178	178.3	179.7	180.7	180.4	179.6	179.6	180	179.5	179.7	179	179.5	178.4	100.6	101.2	100.7	101	101.4	101	100.3	100.5	101.7	100.9	99.3	400.1	180	179.3	401
8:07:21 AM	267	179.4	0	178.6	178.1	175.3	177.2	174.9	168.4	178.1	178.3	179.7	180.7	180.4	179.7	179.7	180	179.6	179.7	179	179.5	178.6	100.5	101.1	100.8	101	101.5	100.9	100.4	100.9	101.7	101	99.1	400.3	180	179.3	401
8:07:42 AM	267.4	179.4	0	178.6	178.1	175.4	177.2	175	168.4	178.1	178.3	179.8	180.7	180.4	179.7	179.7	180	179.6	179.7	179	179.5	178.7	100.7	101	101	101	101.5	100.7	100.4	100.7	101.7	100.9	99.1	400.4	180	179.3	401
8:08:21 AM	268	179.4	0	178.7	178.1	175.5	177.3	175.1	168.5	178.1	178.3	179.8	180.7	180.5	179.7	179.7	180	179.6	179.7	179.1	179.6	178.8	101.7	101.1	100.7	101	101.4	100.9	100.4	100.5	101.9	100.9	99.1	400.5	180	179.3	401
8:09:20 AM	269	179.4	0	178.7	178.2	175.6	177.4	175.3	168.6	178.2	178.4	179.9	180.8	180.5	179.7	179.7	180.1	179.6	179.8	179.1	179.6	179.1	101.5	101	101.1	100.9	101.4	100.8	100.4	100.6	101.8	100.9	99	400.6	180	179.2	401
8:10:22 AM	270.1	179.5	0	178.8	178.3	175.6	177.5	175.5	168.8	178.3	178.5	180	180.9	180.7	179.9	179.9	180.3	179.7	179.8	179.2	179.7	179.3	100.7	101	100.8	100.9	101.4	100.9	100.5	100.6	102	100.8	98.9	400.4	180	179.1	401
8:11:20 AM	271	179.5	0	178.9	178.4	175.8	177.6	175.7	168.9	178.4	178.5	180	181.1	180.7	180	180	180.4	179.8	180	179.3	179.8	179.6	100.7	101.1	101	101	101.6	101	100.4	100.6	101.9	100.9	98.9	400.7	180	178.9	401
8:12:20 AM	272	179.7	0	179	178.5	175.9	177.7	175.9	169.1	178.5	178.7	180.2	181.2	180.9	180.1	180	180.5	179.9	180.1	179.4	179.9	179.8	100.5	100.9	101.1	100.9	101.3	100.8	100.5	100.7	101.8	100.8	99.3	400.7	180	178.8	401
8:13:22 AM	273.1	179.8	0	179.1	178.6	176.1	177.9	176.1	169.2	178.6	178.8	180.2	181.3	181	180.2	180.1	180.7	180	180.2	179.5	180	179.9	100.7	101	101.1	101	101.6	101.1	100.3	100.9	101.8	100.9	99	400.8	180	178.7	401
8:14:21 AM	274	179.9	0	179.2	178.7	176.1	178.1	176.2	169.3	178.7	178.9	180.4	181.4	181	180.3	180.2	180.9	180.1	180.3	179.6	180	180.1	100.6	101.1	100.8	101	101.6	101	100.4	100.7	101.7	101	98.9	400.7	180	178.6	401
8:15:20 AM	275	180	0	179.3	178.8	176.4	178.2	176.4	169.7	178.8	179	180.5	181.4	181.1	180.4	180.3	181	180.2	180.3	179.7	180.2	180	100.7	101.2	101	101	101.4	101	100.4	100.9	101.7	101.1	99	400.7	180	178.6	401
8:16:22 AM	276.1	180	0	179.4	178.9	176.4	178.3	176.6	169.8	178.8	179	180.5	181.5	181.1	180.4	180.3	181	180.3	180.4	179.8	180.3	180	100.9	101.1	101.3	101	101.5	100.9	100.3	100.8	102	100.8	99.1	400.3	180	178.5	401
8:17:23 AM	277.1	180.1	0	179.5	179	176.4	178.5	176.7	169.9	178.9	179.1	180.6	181.5	181.1	180.5	180.4	181.1	180.3	180.5	179.9	180.3	180	100.6	101	100.9	101	101.5	100.9	100.6	100.9	101.8	101	98.9	401.8	180	178.5	401
8:18:20 AM	278	180.1	0	179.5	179	176.5	178.5	176.8	168.8	178.9	179.1	180.6	181.5	181.2	180.4	180.4	181	180.3	180.5	180	180.4	179.5	100.5	101	101.1	101	101.3	100.8	100.4	100.9	101.8	101	99.1	400.8	180	178.5	401
8:19:22 AM	279.1	180	0	179.5	179	176.4	178.5	176.9	168.8	178.9	179	180.5	181.2	181	180.3	180.3	180.8	180.2	180.4	179.9	180.3	178.6	100.6	101	100.9	101	101.2	101	100.6	100.9	101.7	100.9	99	400.5	180	178.7	401
8:20:21 AM	280	179.9	0	179.5	178.9	176.4	178.3	177	168.7	178.8	178.9	180.5	181.2	180.8	180.3	180.3	180.6	180.1	180.4	179.9	180.3	178.5	100.7	101	100.9	101	101.5	100.8	100.4	100.7	102	101	99	400.5	180	178.8	401
8:21:22 AM	281.1	179.9	0	179.5	178.9	176.5	178.6	177.1	168.7	178.9	178.9	180.5	181	180.8	180.2	180.2	180.5	180.2	180.3	179.8	180.3	178.6	100.4	100.9	100.8	100.9	101.5	101	100.5	100.8	102	100.9	99.1	400.8	180	179	401
8:22:22 AM	282.1	179.8	0	179.4	178.9	176.5	178.5	177.2	168.8	178.9	178.8	180.5	181	180.8	180.2	180.1	180.4	180.1	180.3	179.8	180.3	178.7	100.7	101.1	100.9	101	101.6	100.7	100.5	100.8	101.9	101	99.3	401	180	179	401
8:23:21 AM	283	179.8	0	179.5	179	176.5	178.6	177.3	168.7	178.9	178.8	180.5	181.1	180.8	180.2	180.2	180.4	180.1	180.3	179.8	180.3	178.8	100.7	101.2	100.9	100.9	101.4	101.1	100.5	100.7	102	101	99.1	401	180	178.9	401
8:24:22 AM	284.1	179.7	0	179.5	179	176.5	178.6	177.4	168.8	178.9	178.9	180.5	181.1	180.8	180.2	180.2	180.4	180.1	180.3	179.8	180.3	178.9	100.7	101.1	101	101	101.5	100.8	100.6	100.9	102	101.1	98.9	400.9	180	178.9	401
8:25:21 AM	285	179.8	0	179.5	178.9	176.5	178.6	177.4	168.8	178.9	178.8	180.5	181.1	180.8	180.3	180.2	180.4	180.1	180.3	179.8	180.3	179	100.5	100.9	100.8	100.9	101.5	100.9	100.4	100.8	102	101	99.2	400.8	180	178.9	401
8:26:21 AM	286	179.8	0	179.5	179	176.6	178.7	177.5	168.8	178.9	178.9	180.5	181.1	180.8	180.2	180.2	180.4	180.1	180.3	179.9	180.3	179.1	100.7	101.1	101.1	101	101.6	100.8	100.4	100.7	102	100.8	99.2	402	180	178.9	401
8:27:21 AM	287	179.8	0	179.5	179	176.7	178.7	177.6	168.9	179	178.9	180.6	181.1	180.9	180.3	180.2	180.5	180.1	180.4	179.9	180.3	179.2	100.6	101.1	100.9	100.8	101.4	100.9	100.5	100.9	102	100.7	99.2	401.9	180	178.9	401
8:28:21 AM	288	179.8	0	179.5	179	176.7	178.8	177.6	168.9	179	178.9	180.6	181.1	180.8	180.2	180.2	180.6	180.1	180.3	179.9	180.3	179.3	100.7	101.1	101	100.9	101.6	101	100.5	100.9	102	101	99.1	401.8	180	178.9	401
8:29:21 AM	289	179.8	0	179.5	179	176.7	178.8	177.8	169	179	178.9	180.6	181.1	180.8	180.3	180.3	180.6	180.2	180.4	179.9	180.3	179.2	100.8	101.1	101	100.9	101.4	101.1	100.5	100.9	101.9	101.1	99.1	401.6	180	178.9	401
8:30:21 AM	290	179.8	0	179.5	179	176.6	178.8	177.8	169	179.1	179	180.6	181.1	180.9	180.3	180.3	180.6	180.1	180.3	180	180.3	179.2	100.7	101.1	100.8	101	101.6	101.1	100.5	100.9	102	100.9	99.1	401.6	180	178.9	401
8:31:21 AM	291	179.8	0	179.5	179.1	176.7	178.8	177.9	169	179	179	180.6	181.1	180.9	180.3	180.3	180.5	180.1	180.4	180	180.4	179.2	100.6	101.1	100.9	101	101.3	100.9	100.6	100.8	101.8	101.1	99.2	401.5	180	178.9	401
8:32:20 AM	292	179.8	0	179.6	179.1	176.5	178.8	177.9	169	179	179	180.6	181.1	180.8	180.3	180.2	180.6	180.1	180.3	180	180.4	179.2	100.6	101.3	100.9	101	101.5	100.9	100.5	100.9	102.2	101	99.3	401.2	180	178.9	401
8:33:21 AM	293	179.8	0	179.6	179.1	176.7	178.9	178	169.1	179.1	179	180.6	181.1	180.9	180.3	180.3	180.6	180.2	180.4	180	180.4	179.2	100.8	100.9	100.9	100.8	101.5	100.9	100.5	100.6	102.1	101	99.1	401.3	180	178.9	401
8:34:21 AM	294	179.8	0	179.6	179.1	176.6	178.7	178.1	169.2	179.1	179	180.7	181.1	180.9	180.3	180.3	180.6	180.2	180.4	180	180.4	179.2	100.7	101	101	101	101.5	101	100.5	100.8	102	100.9	99	401.1	180	178.9	401
8:35:20 AM	295	179.8	0	179.6	179.1	176.8	178.8	178.1	169.2	179.1	179	180.7	181.1	180.9	180.4	180.3	180.6	180.2	180.4	180	180.4	179.2	100.8	101.2	101	101	101.5	101	100.4	100.9	102	100.8	98.9	401.1	180	178.9	401
8:36:21 AM	296	179.8	0	179.6	179.2	176.8	178.8	178.2	169.6	179.1	179.1	180.7	181.2	181	180.3	180.3	180.6	180.2	180.4	180.1	180.4	179.3	100.7	101.2	100.9	101	101.6	101	100.5	100.9	102	101.2	99	401.2	180	178.8	401
8:37:20 AM	297	179.8	0	179.7	179.2	176.9	178.9	178.2	169.6	179.1	179	180.7	181.2	180.9	180.4	180.3	180.6	180.2	180.5	180.1	180.5	179.3	100.5	101.1	101.1	100.9	101.4	100.9	100.5	100.9	102.1	101	99.2	401.1	180	178.8	401
8:38:20 AM	298	179.9	0	179.7	179.2	176.8	178.8	178.2	169.6	179.2	179.1	180.7	181.2	181	180.4	180.3	180.7	180.3	180.5	180.1	180.5	179.4	100.5	101	101	101	101.3	101.1	100.6	100.9	102	100.9	99	400.7	180	178.8	401

8:39:21 AM	299	179.8	0	179.6	179.1	170.8	168.3	178.3	169.6	179.1	179	180.7	181.1	180.9	180.3	180.2	180.5	180.2	180.4	180.1	180.4	178.7	101.6	101.1	100.8	100.9	101.6	101	100.5	100.9	101.9	100.9	99	399.6	180	178.9	401
8:40:21 AM	300	179.7	0	179.6	179.1	173.7	174	178.2	169.4	179	178.9	180.6	180.9	180.7	180.1	180.1	180.3	180.1	180.3	180	180.4	178.1	100.8	101.2	100.9	101	101.7	100.8	100.5	100.9	102.1	101.2	99	399.6	180	179.1	401
8:41:22 AM	301.1	179.6	0	179.5	179	169.5	165.7	178.2	169.4	179	178.8	180.6	180.8	180.6	180.1	180.1	180.2	180	180.2	179.9	180.3	178.3	100.2	101	101	100.9	101.5	100.9	100.5	100.9	102.1	101	99.1	401	180	179.2	401
8:42:21 AM	302	179.5	0	179.5	179	171.2	168.9	178.2	169.4	178.9	178.7	180.5	180.7	180.5	180.1	180.1	180.1	179.9	180.2	179.9	180.3	178.4	100.6	101.2	101	100.9	101.5	100.9	100.4	100.9	102	101	99.1	401.2	180	179.3	401
8:43:20 AM	303	179.5	0	179.5	179	166.6	158	178.2	169.3	178.9	178.7	180.5	180.6	180.5	180	180	180.1	179.9	180.2	179.8	180.2	178.5	100.7	101.1	100.9	100.9	101.6	101	100.5	100.9	102.1	101.2	99	401.1	180	179.3	401
8:44:22 AM	304.1	179.5	0	179.5	178.9	172.2	170.7	178.3	169.3	178.9	178.7	180.4	180.7	180.5	180	179.9	180.1	179.9	180.1	179.8	180.2	178.6	100.8	101.1	101	100.8	101.5	101	100.7	100.9	102.2	101	99.1	400.9	180	179.3	401
8:45:20 AM	305	179.5	0	179.5	179	174.4	178.2	178.3	169.4	178.9	178.7	180.4	180.7	180.4	180	179.9	180.1	179.8	180.1	179.8	180.2	178.7	100.5	101	100.9	100.8	101.6	100.9	100.5	100.6	102	101	99.1	401.1	180	179.3	401
8:46:20 AM	306	179.5	0	179.4	179	176.5	178.8	178.3	169.4	178.8	178.7	180.5	180.7	180.5	179.9	179.9	180.1	179.9	180.1	179.8	180.2	178.9	100.7	101.1	101	100.9	101.3	100.9	100.5	100.7	102.2	101	99	401	180	179.3	401
8:47:22 AM	307.1	179.5	0	179.4	179	176.6	178.8	178.3	169.4	178.9	178.7	180.5	180.8	180.6	180	180	180.2	179.9	180.1	179.9	180.2	179	100.8	101.1	100.9	100.8	101.5	101.1	100.7	100.9	102.1	100.9	99.1	401.2	180	179.2	401
8:48:22 AM	308.1	179.6	0	179.5	179	176.6	178.8	178.3	169.4	178.9	178.7	180.5	180.8	180.6	180.1	180	180.2	179.9	180.2	179.9	180.2	179.1	100.7	101.3	101.2	100.8	101.4	101	101.3	100.6	102.1	100.8	99.2	401.1	180	179.2	401
8:49:22 AM	309.1	179.6	0	179.5	179	176.7	178.7	178.4	169.5	178.9	178.7	180.5	180.9	180.7	180.1	180.1	180.3	179.9	180.2	179.9	180.3	179.2	100.7	101.1	101.1	100.8	101.6	101	100.6	100.9	102.2	101	99.1	400.9	180	179.1	401
8:50:21 AM	310	179.6	0	179.5	179.1	176.7	178.7	178.4	169.6	179	178.8	180.6	181	180.7	180.2	180.1	180.4	180	180.2	180	180.3	179.4	101	101.1	100.8	100.9	101.2	101.1	100.5	100.9	102.2	101.1	98.8	400.9	180	179	401
8:51:22 AM	311.1	179.7	0	179.6	179.1	176.7	178.9	178.4	169.6	179	178.9	180.6	181.1	180.8	180.2	180.2	180.5	180.1	180.3	180	180.3	179.5	100.9	101	101	100.8	101.3	100.9	100.5	100.9	102.3	100.8	99.1	401	180	178.9	401
8:52:22 AM	312.1	179.7	0	179.6	179.2	176.7	179	178.5	169.7	179	178.9	180.6	181.1	180.8	180.2	180.2	180.5	180.1	180.3	180	180.3	179.4	100.7	101.1	101	100.9	101.5	100.9	100.4	100.7	102.2	101	98.9	400.7	180	178.9	401
8:53:21 AM	313	179.8	0	179.7	179.2	176.9	179.1	178.5	169.7	179	179	180.7	181	180.8	180.3	180.2	180.6	180.1	180.4	180.1	180.4	179.4	100.6	101.1	100.8	100.8	101.6	101	100.6	100.9	102.2	100.9	99.1	400.7	180	179	401
8:54:22 AM	314.1	179.8	0	179.7	179.2	176	179.1	178.5	169.7	179.1	179	180.6	181.1	180.9	180.3	180.2	180.6	180.2	180.4	180.1	180.4	179.4	100.5	101.1	101	100.8	101.5	101	100.5	100.9	102.2	101	99.1	400.4	180	178.9	401
8:55:22 AM	315.1	179.8	0	179.7	179.2	176.8	179	178.6	169.8	179.2	179	180.7	181.2	180.9	180.4	180.3	180.7	180.2	180.4	180.2	180.5	179.4	100.9	101.1	100.8	101	101.5	100.8	100.6	101	102.4	100.9	98.9	402.2	180	178.8	401
8:56:21 AM	316	179.9	0	179.7	179.3	176.8	179	178.6	169.8	179.2	179.1	180.7	181.2	180.9	180.4	180.3	180.7	180.2	180.5	180.2	180.5	179.4	100.8	101.2	100.9	100.9	101.4	100.9	100.6	100.9	102.5	100.8	99.2	402	180	178.8	401
8:57:22 AM	317.1	179.9	0	179.8	179.3	176.8	179.1	178.7	169.8	179.2	179.1	180.7	181.2	180.9	180.4	180.3	180.7	180.3	180.5	180.2	180.5	179.5	100.8	101.1	101	101	101.4	100.9	100.5	100.9	102.1	101	99	402	180	178.8	401
8:58:21 AM	318	179.9	0	179.8	179.3	176.9	179.1	178.7	169.8	179.2	179.1	180.8	181.2	180.9	180.4	180.3	180.8	180.3	180.5	180.2	180.5	179.5	100.6	101.2	100.9	101	101.3	100.8	100.7	100.8	102.3	101	99	401.9	180	178.8	401
8:59:21 AM	319	180	0	179.8	179.3	176.9	179.1	178.7	169.8	179.2	179.1	180.8	181.2	180.9	180.5	180.3	180.7	180.3	180.5	180.3	180.6	179.5	100.8	101.4	101	100.8	101.4	100.9	100.6	100.8	102.3	100.9	99.2	401.7	180	178.8	401
9:00:21 AM	320	179.9	0	179.8	179.3	172.6	173.6	178.7	169.8	179.2	179.1	180.7	181.2	180.9	180.3	180.2	180.6	180.2	180.5	180.2	180.5	178.6	100.7	101.2	100.8	100.7	101.4	100.8	100.4	100.8	102.3	101	99	400.5	180	178.8	401
9:01:21 AM	321	179.8	0	179.7	179.2	171.8	169.9	178.7	169.7	179.1	179	180.6	180.9	180.7	180.2	180.2	180.4	180.2	180.4	180.1	180.4	178.2	100.7	101.3	101	100.8	101.3	101	100.4	100.7	102.3	101.1	99	400.7	180	179.1	401
9:02:22 AM	322.1	179.7	0	179.7	179.2	171.4	169.2	178.7	169.7	179.1	178.9	180.6	180.8	180.6	180.2	180	180.2	180.1	180.3	180.1	180.4	178.3	100.8	101.1	100.9	100.9	101.6	101.1	100.7	100.8	102.3	101.1	99	400.7	180	179.2	401
9:03:21 AM	323	179.7	0	179.6	179.1	172	170.4	178.7	169.6	179	178.8	180.6	180.7	180.6	180.1	180	180.2	180	180.3	180	180.4	178.3	100.6	101.2	101	101	101.5	100.9	100.8	100.8	102.2	101	99.2	400.7	180	179.3	401
9:04:20 AM	324	179.6	0	179.6	179.1	172.5	171.1	178.7	169.6	179	178.8	180.6	180.7	180.5	180.1	180.1	180.1	180	180.2	180	180.3	178.5	100.7	101.2	101	100.8	101.5	100.9	100.5	100.8	102.3	101.2	98.9	400.7	180	179.3	401
9:05:20 AM	325	179.6	0	179.6	179.1	168.9	165.4	178.7	169.6	179	178.8	180.5	180.8	180.5	180.1	180	180.1	180	180.2	180	180.3	178.6	100.7	101.4	101.2	100.7	101.5	100.9	100.7	100.9	102.2	101.1	99.1	400.4	180	179.3	401
9:06:21 AM	326	179.6	0	179.5	179.1	173.8	173.8	178.7	169.5	179	178.8	180.5	180.7	180.5	180.1	180	180.2	180	180.1	179.9	180.3	178.7	100.7	101.3	101.1	100.8	101.4	101	100.5	100.9	102.4	101	99.1	400.6	180	179.3	401
9:07:21 AM	327	179.6	0	179.6	179.1	174.6	175.3	178.7	169.5	179	178.7	180.5	180.8	180.6	180.1	180	180.2	179.9	180.1	179.9	180.3	178.9	100.7	101.2	101.2	100.8	101.6	100.9	100.7	100.7	102.4	101.2	99.3	400.6	180	179.2	401
9:08:22 AM	328.1	179.5	0	179.6	179.1	174.7	175.2	178.7	169.5	179	178.7	180.5	180.8	180.6	180.1	180.1	180.2	180	180.2	180	180.3	178.9	100.7	101.3	101	100.9	101.4	100.9	100.6	100.9	102.3	100.9	99.2	400.6	180	179.2	401
9:09:21 AM	329	179.6	0	179.6	179.1	175.8	175.9	178.7	169.5	179	178.8	180.6	180.8	180.6	180.1	180.1	180.3	180	180.2	180	180.3	179.1	100.6	101.4	100.9	100.9	101.5	100.9	100.5	100.8	102.2	101	99.2	400.5	180	179.2	401
9:10:22 AM	330.1	179.6	0	179.6	179.2	175.2	177.4	178.7	169.6	179	178.9	180.6	180.9	180.7	180.2	180.1	180.4	180	180.3	180	180.3	179.2	100.8	101.1	101	100.9	101.6	100.8	100.7	100.9	102.2	101.1	99.1	400.2	180	179.1	401
9:11:22 AM	331.1	179.7	0	179.6	179.2	176.6	178.9	178.7	169.6	179.1	178.9	180.6	181	180.7	180.2	180.2	180.5	180	180.3	180	180.4	179.3	100.8	101.2	100.9	100.9	101.4	101.1	100.6	100.9	102.4	101.1	98.9	401.4	180	179	401
9:12:20 AM	332	179.7	0	179.6	179.2	176.8	179	178.8	169.7	179.1	178.9	180.6	181	180.7	180.2	180.1	180.5	180.1	180.3	180.1	180.3	179.5	100.7	101.3	101	100.9	101.6	100.9	100.5	100.7	102.3	101.2	99	401.3	180	179	401
9:13:22 AM	333.1	179.8	0	179.7	179.2	176.9	179.1	178.8	169.7	179.1	179	180.7	181.1	180.8	180.3	180.2	180.5	180.1	180.4	180.1	180.4	179.4	100.7	101.3	101	100.8	101.4	101.2	100.4	100.8	102.5	101	99.2	400.7	180	178.9	401
9:14:21 AM	334	179.8	0	179.7	179.2	176.8	179.1	178.7	169.7	179.1	179	180.7	181	180.8	180.2	180.1	180.6	180.1	180.4	180.2	180.4	179.2	100.7	101.3	101.1	100.8	101.5	101.1	100.4	100.9	102.7	100.9	99	400.9	180	179	401
9:15:20 AM	335	179.8	0	179.7	179.2	176.6	178.7	178.7	169.8	179.1	179	180.7	181	180.8	180.2	180.2	180.5	180.2	180.4	180.1	180.4	179.2	100.6	101.1	100.9	100.8	101.6	101	100.7	100.9	102.5	101	99.1	400.7	180	179	401
9:16:22 AM	336.1	179.8	0	179.7	179.2	176.8	178.9	178.8	169.8	179.2	179	180.7	181	180.8	180.3	180.2	180.6	180.1	180.4	180.2	180.4	179.1	100.5	101.3	100.8	100.9	101.4	101	100.6	100.9	102.6	101.1	99.3	400.7	180	179	401
9:17:21 AM	337	179.8	0	179.7	179.3	176.7	178.7	178.8	169.7	179.2	179	180.7	181.1	180.9	180.3	180.2	180.5	180.2	180.4	180.2	180.5	179.1	100.8	101.2	100.9	100.7	101.6	101	100.5	101	102.5	100.9	99	401.6	180	178.9	401
9:18:22 AM	338.1	179.8	0	179.7	179.3	176.9	178.8	178.8	173	179.2	179	180.7	181.1	180.8	180.3	180.2	180.6	180.2	180.5	180.2	180.5	179.2	100.7	101.2	101	100.9	101.3	101.1	100.6	100.9	102.6	101.2	99.2	402	180	179	401
9:19:22 AM	339.1	179.8	0	179.7	179.3	176.8	178.9	178.8	173.1	179.2	179	180.7	181.1	180.8	180.4	180.3	180.5	180.2	180.5	180.2	180.4	179.2	100.6	101.3	101.1	100.8	101.6	100.9	100.7	101	102.4	101.1	99.2	401.8	180	178.9	401
9:20:21 AM	340	179.9	0	179.8	179.3	176.7	178.9	178.8	173.1	179.1	179	180.7	181	180.8	180.3	180.2	180.6	180.2	180.5	180.2	180.5	179.3	100.6	101.2	100.9	100.9	101.3	100.8	100.7	100.6	102.5	101.1	98.9	401.7	180	179	401
9:21:22 AM	341.1	179.9	0	179.8	179.3	176.9	179	178.8	173.2	179.2	179	180.7	181.1	180.9	180.4	180.3	180.6	180.3	180.5	180.2	180.5	179.3	100.8	101.2	101	101	101.6	101	100.6	100.9	102.5	100.9	99	401.6	180	178.9	401
9:22:21 AM	342	179.9	0	179.8	179.3	176.9	179	178.8	173.1	179.2	179.1	180.8	181.1	180.9	180.4	180.3	180.6	180.3	180.5	180.2	180.5	179.3	100.6	101.4	101	100.8	101.6	101	100.7	100.9	102.7	101.1	99	401.6	180	178.9	401
9:23:21 AM	343	179.9	0	179.8	179.3	176.8	179	178.9	173.1	179.2	179.1	180.8	181.1	180.9	180.4	180.3	180.6	180.3	180.5	180.2	180.5	179.4	100.6	101.1	100.8	100.8	101.3	101.1	100.5	100.9	102.7	101.1	99.1	401.6	180	178.9	401
9:24:22 AM	344.1	179.9	0	179.9	179.3	177.1	179.3	178.9	173.3	179.3	179.1	180.8	181.2	180.9	180.5	180.4	180.7	180.3	180.5	180.3	180.6	179.5	100.6	101.2	100.8	100.7	101.4	100.9	100.8	101	102.3	101.2	99.2	401.5	180	178.8	401
9:25:21 AM	345	179.9	0	179.8	179.3	176.9	178.8	178.9	173.2	179.3	179.1	180.8	181.2	180.9	180.4	180.3	180.7	180.3	180.5	180.2	180.6	179.1	100.7	101.2	101.1	100.7	101.5	101	100.7	100.9	102.4	101.2	99.1	400.8	180	178.8	401
9:26:21 AM	346	179.9	0	179.8	179.3	175.2	175.9	178.9	173.2	179.3	179.1	180.8	181.1	180.9	180.4	180.3	180.6	180.3	180.5	180.2	180.5	179	100.8	101.1	101.1	100.7	101.6	100.7	100.5	100.9	102.8	101	99.1	400.8	180	178.9	401
9:27:22 AM	347.1	179.9	0	179.8	179.3	173.8	173.4	178.9	173.2	179.3	179	180.7	181.1	180.9	180.4	180.3	180.5	180.3	180.5	180.2	180.5	178.9	100.8	101.2	101.1	100.8	101.4	101.1	100.6	100.9	102.5	101	99	400.7	180	178.9	401
9:28:21 AM	348	179.8	0	179.8	179.3	174.9	175.3	178.9	173.2	179.2	179	180.7	181	180.8	180.3	180.2	180.5	180.2	180.5	180.2	180.5	178.9	100.4	101.2	100.8	101	101.4	101	100.5	101	102.6	100.9	99.1	400.4	180	179	401
9:29:21 AM	349	179.8	0	179.7	179.3	175.6	176.7	178.9	173.2	179.2	179	180.7	181	180.8	180.3	180.2	180.5	180.2	180.4	180.2	180.5	178.9	100.7	101.2	100.9	100.8	101.3	100.8	101.4	100.9	102.8	101	99.2	400.4	180	179	401
9:30:22 AM	350.1	179.8	0	179.7	179.3	176.2	177.9	178.9	173.2	179.2	179	180.7	181	180.8	180.3	180.2	180.5	180.2	180.4	180.2	180.5	178.9	100.7	101.2	101	101	101.5	100.9	100.7	101	102.7	101.1	99	400.3	180	179	401
9:31:21 AM	351	179.8	0	179.7	179.3	176.3	178	178.9	173.2	179.2	179	180.7	181	180.7	180.2	180.1	180.4	180.1	180.4	180.2	180.4	178.9	100.5	101.2	100.9	100.9	101.4	100.9	100.7	100.9	102.6	101.2	99	400.3	180	179	401
9:32:21 AM	352	179.8	0	179.7	179.3	175.8	177	178.9	173.2	179.2	178.9	180.7	181	180.7	180.3	180.2	180.4	180.1	180.4	180.1	180.4	179	100.6	101.1	101.1	100.8	101.4	101.1	100.6	100.9	102.5	101.2	99.1	400.1	180	179	401
9:33:22 AM	353.1	179.8	0	179.7	179.3	175.5	176.5	178.9	173.2	179.1	178.9	180.7	180.9	180.7	180.2	180.2	180.4	180.1	180.4	180.1	180.4	178.9	100.5	101	101	100.9	101.6	101.1	100.6	100.9	102.7	101	99.1	401	180	179.1	401
9:34:21 AM	354	179.7	0	179.7	179.2	175.3	176.2	178.9	173.2	179.2	178.9	180.6	180.9	180.7	180.3	180.1	180.5	180.1	180.4	180.1	180.4	179	100.6	101.1	100.9	100.9	101.6	100.9	100.7	100.8	102.3	101	99	401.3	180	179.1	401
9:35:21 AM	355	179.7	0	179.7	179.3	175.5	176.5	178.9	173.2	179.1	178.9	180.6	180.9	180.7	180.3	180.1	180.4	180.1	180.3	180.2	180.4	179.1	100.9	101.1	100.9	100.8	101.4	101	100.5	101	102.5	101.1	99.1	401.4	180	179.1	401
9:36:22 AM	356.1	179.7	0	179.7	179.3	175.2	176.9	178.9	173.3	179.1	178.9	180.6	180.9	180.7	180.3	180.2	180.5	180.1	180.4	180.2	180.4	179.1	100.6	101.3	101	100.9	101.4	100.8	100.5	100.9	102.8	101.2	99.1	401.3	180	179.1	401
9:37:21 AM	357	179.8	0	179.7	179.3	175.8	177.3	178.9	173.3	179.1	179	180.7	181	180.7	180.3	180.2	180.5	180.2	180.4	180.2	180.4	179.2	100.7	101	100.9	100.8	101.4	100.9	100.5	100.9	102.8	101.1	99.1	401.2	180	179	401
9:38:21 AM	358	179.8	0	179.7	179.3	176.3	177.6	178.8	167.1	179.2	179	180.7	181	180.8	180.3	180.2	180.5	180.2	180.4	180.2	180.4	179.2	100.8	101.4	101	101	101.6	101	100.6	100.9	102.6	101	99.1	401.1	180	179	401
9:39:22 AM	359.1	179.8	0	179.8	179.3	176.1	177.7	178.9	167	179.1	179	180.7	181.1	180.8	180.3	180.2	180.5	180.2	180.4	180.2	180.5	179.3	100.6	101.3	100.9	100.8	101.3	101.3	100.7	101	102.6	101.2	99	401	180	178.9	401
9:40:22 AM	360.1	179.8	0	179.8	179.3	176.6	178	178.9	167.1	179.2	179	180.7	181.1	180.8	180.3	180.3	180.5	180.2	180.4	180.2	180.5	179.3	100.7	101.1	100.8	100.9	101.5	101	100.7	100.9	102.6	100.8	99.1	401	180	178.9	401
9:41:21 AM	361	179.8	0	179.8	179.3	176.7	178.5	178.9	167	179.2	179	180.7	181.1	180.9	180.4	180.2	180.6	180.2	180.5	180.2	180.5	179.4	100.6	101.2	101	101	101.3	101.1	100.7	100.9	102.6	101	99	401	180	178.9	401
9:42:20 AM	362	179.8	0	179.7	179.3	166.8	160.2	178.9	167	179.2	179	180.8	181.1	180.8	180.3	180.2	180.5	180.2	180.5	180.2	180.5	178.7	100.7	101.1	100.9	100.9	101.5	100.8	100.7	100.9	102.8	101.1	99	399.6	180	178.8	401
9:43:22 AM	363.1	179.7	0	179.7	179.2	152.8	134.9	178.8	166.9	179.1	178.9	180.6	180.9	180.7	180.2	180.1	180.3	180.1	180.3	180.2	180.4	178.1	100.7	101.2	100.8	101	101.4	100.9	100.4	100.9	102.8	101.3	99	401.1	180	179.1	401
9:44:21 AM	364	179.6	0	179.6	179.1	156.5	141.2	178.9	166.8	179	178.8	180.6	180.8	180.5	180.1	180	180.2	180	180.3	180.1	180.4	178.2	100.9	101.2	101.1	100.9	101.6	100.8	100.6	100.9	102.8	101.2	99.2	401.2	180	179.2	401
9:45:22 AM	365.1	179.5	0	179.6	179.1	156.2	140.4	178.8	166.8	179	178.8	180.6	180.7	180.5	180.1	180	180.1	179.9	180.2	180	180.3	178.3	100.5	101.1	100.8	100.7	101.3	100.8	100.7	101	102.9	101.1	99.2	401.1	180	179.3	401
9:46:22 AM	366.1	179.5	0	179.6	179.1	165.5	157.6	178.8	166.8	179	178.7	180.6	180.8	180.6	180	180	180	179.9	180.2	180	180.3	178.4	100.7	101.1	100.9	100.8	101.5	101	100.7	100.9	102.8	101	99.1	401.1	180	179.2	401
9:47:21 AM	367	179.5	0	179.5	179.1	169.8	166.3	178.8	166.9	179	178.7	180.5	180.7	180.5	180	179.9	180	179.9	180.2	179.9	180.2	178.5	100.7	101.2	101	100.9	101.4	100.9	100.6	100.9	102.7	101.2	99	401.2	180	179.3	401
9:48:20 AM	368	179.5	0	179.5	179.1	174	174.2	178.8	166.9	179	178.7	180.5	180.7	180.5	180	179.9	180.1	179.9	180.2	179.9	180.3	178.6	100.9	101.2	100.8	100.9	101.4	101	100.7	100.9	102.7	101.1	99	401.1	180	179.4	401
9:49:22 AM	369.1	179.5	0	179.5	179.1	175.6	177	178.8	167.7	178.9	178.7	180.5	180.7	180.5	180	179.9	180.1	179.9	180.1	179.9	180.2	178.8	100.5	101.2	100.9	100.8	101.3	100.8	100.7	101	102.8	101.1	99	401.1	180	179.4	401
9:50:21 AM	370	179.5	0	179.5	179.1	175.9	177.4	178.7	167.8	178.9	178.7	180.5	180.6	180.4	180	179.9	180.1	179.9	180.2	179.9	180.2	178.9	100.7	101.1	101.1	100.8	101.4	101.1	100.5	100.9	102.8	100.8	99	401	180	179.3	401
9:51:22 AM	371.1	179.5	0	179.5	179.1	176.2	177.8	178.8	167.7	178.9	178.7	180.5	180.7	180.5	180.1	179.9	180.2	179.9	180.2	180	180.2	179	100.8	101.2	100.9	100.7	101.4	101	100.8	100.7	102.8	100.9	99.1	401	180	179.3	401
9:52:22 AM	372.1	179.5	0	179.5	179.1	175.6	177	178.7	167.7	179	178.7	180.5	180.8	180.5	180.1	180	180.2	180	180.2	180	180.3	179.1	101.6	101	101	100.9	101.4	100.9	100.6	100.9	102.9	101.2	99.2	401.1	180	179.3	401
9:53:21 AM	373	179.6	0	179.6	179.1	176.1	178.3	178.8	167.8	179	178.8	180.5	180.8	180.6	180.2	180	180.4	180	180.3	180	180.3	179.3	100.8	101.2	100.9	100.8	101.5	100.9	100.6	100.9	102.8	101.2	99.1	401	180	179.2	401
9:54:22 AM	374.1	179.6	0	179.6	179.2	176.7	178.7	178.8	167.7	179	178.9	180.6	181	180.7	180.2	180	180.4	180.1	180.3	180	180.3	179.4	100.8	101.2	101	100.6	101.4	100.8	100.5	100.9	102.8	100.9	99	401.1	180	179.1	401
9:55:21 AM	375	179.7	0	179.7	179.2	176.6	178.9	178.8	167.7	179.1	178.9	180.6	181	180.7	180.2	180.1	180.6	180.1	180.4	180.1	180.4	179.5	100.9	101.2	101.1	100.8	101.6	101	100.6	100.9	103	101.2	99	400.8	180	179	401
9:56:21 AM	376	179.7	0	179.7	179.2	176.6	178.6	178.8	167.7	179.1	178.9	180.7	181.1	180.8	180.3	180.1	180.6	180.2	180.4	180.1	180.4	179.5	100.7	101.2	100.9	100.8	101.5	100.9	100.6	100.9	102.9	101.3	99.1	400.7	180	178.9	401
9:57:21 AM	377	179.8	0	179.7	179.3	176.9	179.1	178.8	168.1	179.1	179	180.7	181.1	180.8	180.3	180.2	180.7	180.2	180.4	180.2	180.4	179.5	100.9	101.2	100.8	100.9	101.6	101	100.7	100.8	103	101.5	99.1	400.7	180	178.9	401
9:58:21 AM	378	179.8	0	179.7	179.3	176.8	179.1	178.9	168.2	179.1	179	180.7	181.1	180.8	180.4	180.2	180.7	180.2	180.4	180.2	180.5	179.5	100.8	101.1	101	100.7	101.5	101	100.6	100.8	102.8	101	99.2	400.4	180	178.9	401
9:59:21 AM	379	179.8	0	179.8	179.3	176.9	179.1	178.9	168.1	179.2	179	180.8	181.1	180.9	180.4	180.3	180.7	180.2	180.5	180.2	180.5	179.4	100.9	101	100.9	100.9	101.5	100.9	100.8	101.1	102.8	101	99.2	401.2	180	178.9	401
10:00:21 AM	380	179.9	0	179.8	179.3	176.9	179.1	178.9	168.1	179.2	179.1	180.8	181.2	180.9	180.4	180.3	180.7	180.2	180.5	180.3	180.5	179.4	100.9	101.1	101.1	100.8	101.5	100.9	100.7	101.1	102.8	101	99	401.2	180	178.8	401
10:01:22 AM	381.1	179.9	0	179.8	179.3	176.6	178.4	178.9	168.1	179.2	179.1	180.7	181.2	180.9	180.4	180.3	180.7	180.3	180.5	180.3	180.5	179.4	100.8	101.4	100.9	100.8	101.3	101	100.6	100.9	102.8	100.9	99.1	401.1	180	178.8	401
10:02:21 AM	382	179.9	0	179.8	179.4	177.1	179.2	178.9	168.2	179.2	179.1	180.7	181.2	180.9	180.5	180.3	180.7	180.3	180.6	180.3	180.6	179.5	100.7	101.3	101	100.7	101.3	101	100.6	100.9	102.9	101.4	99.1	400.8	180	178.8	401
10:03:21 AM	383	179.9	0	179.8	179.4	177.1	179.2	178.9	168.1	179.2	179.1	180.8	181.2	180.9	180.5	180.3	180.8	180.3	180.5	180.3	180.6	179.5	100.8	101.2	101.1	100.8	101.4	100.9	100.6	100.9	103	101.3	99	400.7	180	178.8	401
10:04:22 AM	384.1	180	0	179.9	179.4	177.1	179.2	178.9	168.1	179.3	179.1	180.8	181.2	181	180.5	180.3	180.8	180.4	180.6	180.3	180.6	179.3	100.9	101.3	101	100.9	101.6	101.1	100.5	100.9	102.9	100.9	99.1	401.9	180	178.8	401
10:05:21 AM	385	179.7	0	179.7	179.2	150	129.4	178.8	168.1	179.1	178.9	180.7	180.8	180.6	180.1	180.1	180.3	180.1	180.4	180.2	180.4	177.5	100.8	101.3	100.8	100.9	101.6	101.1	100.8	100.9	103	101.1	99.1	401.4	180	179.2	401
10:06:21 AM	386	179.6	0	179.5	179.1	150.9	131.1	178.8	167.9	179	178.7	180.5	180.6	180.4	180	179.9	180.1	179.9	180.2	180	180.3	177.5	101	101.2	101	101	101.5	100.9	100.6	100.9	103	101	99	401.7	180	179.4	401
10:07:21 AM	387	179.5	0	179.5	179.1	151.4	132.1	178.7	167.8	178.9	178.6	180.5	180.5	180.3	179.9	179.8	179.9	179.8	180.1	180	180.3	177.7	100.7	101.3	100.8	100.9	101.6	101	100.7	100.9	102.9	101.1	99.1	401.9	180	179.5	401
10:07:44 AM	387.4	179.4	0	179.5	179	152.3	134	178.7	167.7	178.9	178.6	180.4	180.5	180.2	179.9	179.8	179.9	179.8	180.1	179.9	180.2	177.7	100.7	101.3	100.8	100.7	101.4	100.9	100.8	101	102.9	101.2	99.2	401.8	180	179.5	401
10:08:22 AM	388.1	179.4	0	179.4	179	154.6	138.3	178.7	167.6	178.8	178.5	180.4	180.4	180.2	179.8	179.7	179.8	179.8	180	179.9	180.2	177.8	100.6	101.1	101.1	100.9	101.6	101.1	100.7	100.9	103	101.1	99.1	401.7	178.2	178.1	401
10:09:21 AM	389	179.2	0	179.2	178.9	149.7	129.5	178.6	167.6	178.7	178.4	180.2	180.2	180	179.6	179.6	179.5	179.6	179.9	179.8	180	177	100.9	101.2	101	100.9	101.5	100.9	100.7	101	103.1	101.2	99.2	399.7	175.3	172.4	401

10:10:22 AM	390.1	178.2	0	178.7	178.2	151.3	132.9	178.3	167.8	178.2	177.6	179.8	179	179	178.4	178.7	178.2	178.8	179.1	179.2	179.4	172.4	100.8	101.3	100.9	100.7	101.6	101	100.6	100.9	103.1	101.2	99	399.3	172.2	167	401
10:11:21 AM	391	176.6	0	177.3	177.1	164.1	159.3	177.8	172.6	177.2	176.2	178.6	177	177.1	176.7	177.3	175.9	177.2	177.8	178.2	178.4	165.9	100.7	101.3	100.9	100.7	101.4	101.1	100.7	100.9	102.9	101.1	99.1	400.7	169.3	162.4	401
10:12:21 AM	392	174.5	0	175.9	175.6	150.8	130.5	177.1	168.5	175.8	174.5	177.1	174.2	174.7	174.7	175.5	172.9	175.3	176	176.8	177.1	159.2	101	101.3	100.9	100.6	101.4	101.1	100.7	100.9	103	101.3	99	401.9	166.3	158.4	401
10:13:22 AM	393.1	172.2	0	174.3	174.1	155.7	152.8	176.3	164.3	174.5	172.6	175.4	171.3	172.3	172.4	173.4	169.5	173.2	173.9	175	175.5	155	100.7	101.1	101	100.6	101.3	101	100.6	101.1	103	101.2	99.2	400.8	163.3	155.2	401
10:14:21 AM	394	169.8	0	172.5	172.4	168.5	161.1	175.4	160.9	173	170.5	173.6	168.4	169.9	170.3	171.5	166.4	170.8	171.7	173.3	174	151.8	100.6	101.3	100.9	100.9	101.6	100.7	100.8	101	103.2	101.2	99.2	400.3	160.3	152.1	401
10:15:21 AM	395	167.6	0	170.8	171	166.2	167.3	174.5	156.4	171.4	168.5	171.9	165.9	167.6	168.1	169.3	163.7	168.6	169.7	171.3	172.4	149.2	100.8	101.2	101.1	100.7	101.6	101.1	100.6	100.8	103.3	101.3	99.1	401.2	157.3	148.8	401
10:16:22 AM	396.1	165	0	168.9	169.2	168.5	173.3	173.5	163.2	169.8	166.5	170.1	163.2	165.3	165.8	167.1	160.6	166.2	167.4	169.4	170.6	146.4	100.8	101.1	101	100.8	101.2	100.9	100.9	100.9	103.1	101.3	99.2	401.9	154.3	145.4	401
10:17:21 AM	397	162.7	0	166.9	167.3	163.8	165.7	172.4	162.6	168.1	164.4	168.3	160.6	162.9	163.6	165.1	157.6	164	165.1	167.4	168.8	142.9	101	101.2	101	100.7	101.6	100.9	101.7	101.2	103.1	101.5	98.9	400.7	151.3	142	401
10:18:20 AM	398	159.9	0	164.7	165.6	161.3	164.3	171.4	164.6	166.2	162.2	166.3	157.8	160.3	161.3	162.8	154.8	161.7	162.9	165.4	166.8	140.6	100.7	101.3	101	100.4	101.4	100.8	100.8	100.9	103.2	101.2	99	401.2	148.3	138.9	401
10:19:21 AM	399	157.4	0	162.6	163.6	163.8	169.5	170.2	164.9	164.2	159.8	164.3	155.2	157.8	158.8	160.5	151.9	159.3	160.5	163.1	164.8	137.6	100.8	101.2	100.9	100.7	101.6	101.1	100.9	101	103.1	101.2	99.1	401.4	145.3	135.4	401
10:20:21 AM	400	155	0	160.6	161.7	160.5	165.1	168.8	155.9	162.5	157.6	162.2	152.7	155.6	156.7	158.4	149.2	156.9	158.3	161	162.7	135.4	100.7	101.3	101.1	100.7	101.4	101.1	100.7	101	103.2	101.2	99.1	401.2	142.3	132	401
10:21:20 AM	401	152.4	0	158.6	159.8	160.4	166.7	167.4	162.2	160.6	155.5	160.2	150	153.1	154.7	156.2	146.4	154.5	156	158.7	160.7	132.7	100.9	101.4	101	100.6	101.5	101	100.7	101.2	103.2	101.1	98.9	401.6	139.3	128.7	401
10:22:21 AM	402	149.8	0	156.3	157.7	158.9	165.2	166.1	160.6	158.6	153.4	158.1	147.2	150.8	152.2	153.8	143.6	152.1	153.6	156.4	158.6	129.8	100.9	101.4	101.1	101	101.4	101	100.9	100.9	103	101.3	99.1	400.5	136.3	125.3	401
10:23:21 AM	403	147.2	0	153.9	156	157	163.6	164.7	158.8	156.3	151.1	156	144.6	148.2	149.8	151.5	140.9	149.6	151.2	154.1	156.5	126.9	100.8	101.4	101.1	100.5	101.5	100.9	100.7	100.8	103.3	101.1	99.1	401.1	133.3	122	401
10:24:22 AM	404.1	144.2	0	151.4	153.6	155	161.8	163.3	157	153.8	148.4	153.4	141.8	145.6	147.2	149	138.2	147	148.7	151.8	154.5	124.2	100.8	101.2	101	100.7	101.4	100.9	100.6	100.8	103.3	101.3	99.1	401.7	130.2	118.7	401
10:25:21 AM	405	141.6	0	149.3	151.9	153	160.1	161.6	155.2	152	146.3	151.3	139.3	143.2	144.7	146.5	135.5	144.5	146.1	149.2	152.2	121.8	101	101.3	100.8	100.7	101.5	101	100.8	100.9	103.1	101.3	99	400.7	127.3	115.3	401
10:26:20 AM	406	138.7	0	146.4	149.5	151	158.4	160	153.3	149.7	143.6	149.1	136.5	140.5	141.9	143.8	132.6	141.8	143.5	146.6	149.8	118.3	100.9	101.3	100.7	100.6	101.2	100.8	100.6	100.9	103.4	101.2	99.1	401.6	124.3	112.2	401
10:27:22 AM	407.1	135.4	0	143.7	146.9	148.9	156.4	158.2	150.9	147	140.7	146.4	133.2	137.4	139.2	141	129.3	138.9	140.7	143.9	147.4	113.7	100.8	101.3	100.9	100.6	101.2	101	100.9	101	103.3	101.3	98.9	400.8	121.2	109.3	401
10:28:21 AM	408	132.4	0	140.8	144.4	146.5	154.5	156.3	148.5	144.4	138.1	143.7	129.8	134.3	136.1	138.3	126	135.9	137.7	141.1	144.7	109.9	100.6	101.3	100.8	100.6	101.6	101	100.9	100.8	103.2	101.4	98.9	401.1	118.3	106.8	401
10:29:20 AM	409	129.4	0	138.3	142	144.2	152.3	154.5	146.2	141.8	135.3	141.2	126.8	131.5	133.5	135.4	122.7	132.8	134.8	138.4	142.3	107.1	100.9	101.1	101.1	100.5	101.5	100.9	100.7	100.9	103.3	101.2	99.2	401.4	115.3	103.9	401
10:30:22 AM	410.1	126.2	0	135.3	139.2	142.1	150.4	152.5	143.9	139.5	132.5	138.4	123.7	128.5	130.7	132.7	119.7	130	131.9	135.7	140	104.2	100.7	101.4	101	100.6	101.5	101.1	100.7	100.9	103.5	101.4	99.2	400.4	112.3	100.8	401
10:31:20 AM	411	123.3	0	132.2	136.8	139.8	148.1	150.4	141.3	136.4	129.9	135.7	120.6	125.7	127.8	129.9	116.7	127.1	129.2	133	137.3	101.3	100.9	101.1	101	100.8	101.6	100.8	100.9	101	103.1	101.4	99.1	400.8	109.3	97.9	401
10:32:22 AM	412.1	120.1	0	129.8	133.9	137.3	145.9	148.4	138.7	133.9	127.1	133	117.6	122.7	124.7	126.9	113.6	124.2	126.3	130	134.4	98.4	100.8	101.4	101	100.5	101.5	101	100.8	101.1	103.5	101.3	99	400.5	106.2	94.9	401
10:33:22 AM	413.1	117.2	0	127.2	131.1	134.9	143.8	146.3	136.2	131	124.3	130.1	114.3	119.7	122.4	123.9	110.5	121.3	123.3	127.1	131.6	95.5	100.7	101.4	101	100.7	101.6	101.1	100.7	101	103.3	101.5	99.2	400.6	103.3	92.2	401
10:34:20 AM	414	114.1	0	124.9	128.9	132.8	141.3	144.2	133.7	128.5	121.6	127.7	111.5	116.8	119.4	121.1	107.7	118.5	120.4	124.3	128.8	93	100.8	101.3	100.8	100.5	101.4	101	100.7	101	103.5	101.3	99.2	400.7	100.3	89.1	401
10:35:22 AM	415.1	111.4	0	122.1	126	130.2	139.1	142	131.2	126	118.4	125	108.6	113.9	116.6	118.2	104.3	115.5	117.4	121.2	125.9	89.5	100.8	101.3	101.1	100.5	101.4	100.8	100.7	100.9	103.3	101.2	99.2	400.9	97.2	86	401
10:36:21 AM	416	108.4	0	119.7	123.3	127.8	136.6	139.9	128.7	123.3	115.4	122.6	105.4	110.9	113.8	115.3	101.3	112.5	114.4	118.3	123.2	87.2	100.7	101.4	100.9	100.6	101.3	101	100.7	100.9	103.2	101.4	99	400.5	94.3	83.1	401
10:37:22 AM	417.1	105.3	0	116.3	120.4	125.5	134.3	137.7	126.1	120.5	112.8	119.9	102.6	108.2	110.8	112.5	98.3	109.7	111.5	115.5	120.4	84.1	100.8	101.3	101	100.5	101.5	100.9	100.7	101.1	103.6	101.4	99.3	400.4	91.2	79.9	401
10:38:21 AM	418	102.7	0	113.5	117.8	123	131.8	135.6	123.8	118	110.2	117.5	99.6	105.2	107.8	109.8	95.5	106.8	108.7	112.6	117.9	81.3	100.8	101.3	101	100.6	101.5	100.8	100.7	101	103.4	101.3	99.1	401	88.3	77	401
10:39:21 AM	419	99.9	0	111	115.2	120.5	129.4	133.3	120.9	115.3	107.3	114.8	97	102.5	105.1	106.9	92.7	103.9	105.8	109.9	115.3	79.1	100.9	101.3	101.1	100.6	101.6	100.8	100.7	101	103.3	101.4	99.1	401.3	85.3	73.6	401
10:40:22 AM	420.1	97.2	0	108	112.4	117.9	127	131.1	118.6	112.8	104.6	112.2	94.4	99.7	102.3	104.1	90	101	103	107	112.5	76.8	101	101.4	101	100.6	101.3	101	100.8	101	103.5	101.2	99.2	400.7	82.3	70.2	401
10:41:22 AM	421.1	94.4	0	105.2	109.6	115.8	124.3	128.8	116	110.1	102.1	109.7	91.5	97	100	101.5	87.5	98.4	100.4	104.5	109.9	74.8	100.8	101.3	101.2	100.5	101.6	100.8	100.8	100.9	103.5	101.5	99.1	401.2	79.3	67	401
10:42:21 AM	422	91.7	0	102.9	106.9	113.2	121.9	126.8	113.3	107.3	99.2	107	88.9	94.5	97.5	98.7	85.1	95.7	97.8	102	107.5	73.2	100.8	101.3	100.9	100.6	101.3	100.8	100.6	100.9	103.5	101.4	99.2	400.3	76.3	63.7	401
10:43:22 AM	423.1	89.1	0	100.5	104.5	110.8	119.8	124.5	110.7	104.4	96.6	103.9	86.4	92.1	95.1	96.1	82.9	93.2	95.4	99.4	105	71.2	100.8	101.2	101	100.6	101.3	101	100.9	100.9	103.4	101.5	99.2	401.2	73.3	60.2	401
10:44:21 AM	424	86.8	0	98.4	102	108.6	117.3	122.4	108.2	102	94	101.6	84.2	89.7	92.8	93.8	80.6	91	93.1	97.2	102.5	69.6	100.6	101.2	101	100.7	101.5	101.1	100.8	101.1	103.5	101.4	99.1	400.5	70.3	56.4	401
10:45:21 AM	425	84.6	0	96.1	99.6	106.4	115	120.3	106	99.6	91.7	99.4	82.2	87.4	90.7	91.6	78.6	88.8	90.9	94.9	100.2	68.2	101	101.4	101.2	100.6	101.5	101.1	100.8	100.9	103.6	101.1	99	401.5	67.3	52.5	401
10:46:21 AM	426	82.6	0	94.2	97.3	104.2	112.9	118.2	103.7	97.5	89.6	96.9	80.1	85.3	88.6	89.3	76.7	86.6	88.5	92.6	97.8	66.7	100.9	101.2	101	100.6	101.6	101	100.7	101.1	103.4	101.2	99.1	401.6	64.3	48.4	401
10:47:21 AM	427	80.6	0	92.1	94.8	102.2	110.5	116.2	101.4	95	87.5	94.6	78.1	83.1	86.4	87.3	74.8	84.5	86.5	90.4	95.5	65.4	100.8	101.3	100.9	100.6	101.5	101.1	100.9	101	103.5	101.4	99.2	401.4	61.3	44.6	401
10:48:20 AM	428	78.7	0	89.7	92.7	100.1	108.5	114	99.2	92.9	85.4	92.7	76.3	81.1	84.2	85.2	73.2	82.7	84.4	88.2	93.3	64	100.8	101.4	101	100.6	101.6	100.9	100.7	100.9	103.5	101.2	99	401	58.3	40.5	401
10:49:21 AM	429	76.8	0	87.7	90.6	98.1	106.1	112	96.9	90.7	83.3	90.6	74.7	79.3	82.2	83.2	71.6	80.8	82.4	86.3	91.4	63	100.9	101.4	101.1	100.6	101.5	100.9	100.9	100.9	103.3	101.2	98.9	400.7	55.3	35.9	401
10:50:21 AM	430	75.2	0	86	88.7	96.1	104.1	110	95	88.8	81.5	88.6	73	77.5	80.4	81.4	70	79	80.5	84.5	89.2	61.9	100.7	101.4	101	100.7	101.5	101	100.8	101.2	103.6	101.4	99.2	401.7	52.3	31.7	401
10:51:20 AM	431	73.6	0	84	86.7	94.2	102	108.1	93	86.7	79.8	86.8	71.4	75.7	78.6	79.6	68.7	77.3	78.9	82.7	87.4	60.7	100.8	101.4	101.2	100.6	101.5	100.9	100.7	101	103.4	101.3	99	401.5	49.3	27.3	401
10:52:21 AM	432	72	0	82.4	84.8	92.2	99.8	106	91.1	85	77.9	84.9	70.1	74.1	76.8	77.9	67.3	75.5	77	80.7	85.5	59.9	100.9	101.4	101.2	100.7	101.5	101.1	100.9	101	103.2	101.3	99.1	401.6	46.3	22.6	401
10:53:21 AM	433	70.5	0	80.7	83.1	90.4	97.8	104.1	89.1	83	76.3	83	68.6	72.5	75.2	76.2	66	74	75.4	79.1	83.7	59	100.7	101.4	100.8	100.5	101.6	101	100.7	100.9	103.3	101.1	99.1	401.5	43.3	20	401
10:54:20 AM	434	69.1	0	79	81.3	88.8	95.9	102.2	87.5	81.5	74.9	81.4	67.4	71	73.8	74.7	64.8	72.5	73.9	77.4	81.9	57.9	100.9	101.4	101.1	100.5	101.4	101.1	100.9	100.9	103.3	101.3	98.9	401.9	40.3	20	401
10:55:21 AM	435	67.7	0	77	79.4	87	93.8	100.3	85.6	79.6	73.3	79.7	66.1	69.7	72	73.2	63.6	71	72.2	75.7	80.3	57.2	101.8	101.4	101.1	100.5	101.4	101.1	100.8	101	103.3	101.5	99.2	400.6	37.3	20	401
10:56:21 AM	436	66.5	0	75.8	78	85.4	91.9	98.6	83.9	78.1	71.9	78.1	65	68.4	70.8	71.9	62.6	69.7	71.1	74.3	78.7	56.2	100.9	101.4	101	100.5	101.4	100.8	100.6	101	103.5	101.3	99.1	400.3	34.3	20	401
10:57:20 AM	437	65.3	0	74.3	76.3	83.7	90.1	97.1	82.1	76.4	70.5	76.5	63.9	67.2	69.6	70.6	61.6	68.5	69.6	72.9	77.2	55.5	100.8	101.4	101.1	100.4	101.3	101.1	100.8	100.9	103.3	101.3	99	401.1	31.3	20	401
10:58:21 AM	438	64.3	0	73.1	74.9	82.2	88.4	95.3	80.6	75.1	69.2	75.1	63	65.9	68.1	69.3	60.6	67.3	68.4	71.5	75.7	54.6	101.9	101.4	100.8	100.5	101.5	101.1	100.9	100.9	103.2	101.3	99	400.4	28.3	20	401
10:59:21 AM	439	63.1	0	71.7	73.3	80.8	86.7	93.5	79	73.5	67.9	73.6	61.9	64.9	67	68.1	59.8	66.3	67.3	70.2	74.3	53.9	101.7	101.4	101	100.4	101.4	101	100.9	100.9	103.4	101.5	99	400.5	25.3	20	401
11:00:22 AM	440.1	62.1	0	70.6	72.1	79.4	85.1	91.9	77.5	72.1	66.7	72.2	60.8	63.8	65.8	66.9	58.9	65.2	66.1	68.9	72.9	53.3	100.9	101.4	101.1	100.7	101.6	101.2	100.7	101	103.3	101.4	99.3	401	22.2	20	401
11:01:21 AM	441	61.1	0	69.3	70.7	77.9	83.6	90.3	76.3	71	65.5	70.9	60.1	62.8	64.7	65.8	58.1	64.1	65	67.8	71.6	52.7	100.8	101.4	101.2	100.6	101.5	101	100.9	100.9	103.3	101.2	99.1	401.6	20	20	401
11:02:21 AM	442	60.2	0	68	69.2	76.5	81.9	88.8	74.8	69.6	64.2	69.5	59.2	61.7	63.5	64.7	57.4	63.1	64	66.8	70.5	52.2	100.8	101.3	101.3	100.5	101.4	101	100.9	100.9	103.5	101.1	99.1	400.6	20	20	401
11:03:22 AM	443.1	59.2	0	66.7	67.9	75.1	80.4	87.2	73.4	68.2	63.2	68.3	58.3	60.7	62.5	63.6	56.6	62.1	63	65.6	69.2	51.6	100.9	101.4	101.2	100.6	101.5	101	100.9	100.9	103.5	101.3	99	401.4	20	20	401
11:04:21 AM	444	58.5	0	65.9	67	73.9	79	85.8	72.2	67.2	62.2	67.3	57.4	59.7	61.5	62.7	55.9	61.2	62.1	64.7	68.1	50.9	101	101.4	100.9	100.6	101.5	101.1	100.8	100.9	103.1	101.4	99.3	400.7	20	20	401
11:05:20 AM	445	57.7	0	64.7	66	72.6	77.5	84.5	71	66	61.4	66.2	56.7	58.9	60.5	61.7	55.3	60.4	61.2	63.8	67	50.5	100.8	101.4	101	100.7	101.7	101	100.9	101	103.2	101.3	99.2	400.8	20	20	401
11:06:20 AM	446	57	0	63.8	64.8	71.5	76.2	83	69.7	64.9	60.4	65.1	56	58.1	59.7	60.8	54.6	59.7	60.4	62.9	66.1	50	100.9	101.4	101.2	100.5	101.5	101	100.9	100.9	103.2	101.5	99.1	401.6	20	20	401
11:07:21 AM	447	56.2	0	62.8	63.7	70.3	74.9	81.7	68.6	64	59.6	64	55.4	57.3	58.9	59.9	54	58.8	59.6	61.9	65.1	49.5	100.9	101.5	101	100.9	101.5	101.1	100.8	101	103.2	101.4	99.2	400.9	20	20	401
11:08:21 AM	448	55.6	0	62	62.8	69.2	73.8	80.3	67.5	63	58.8	63.1	54.7	56.5	58.1	59.2	53.5	58.2	58.9	61.1	64	49	100.9	101.3	101.2	100.5	101.7	100.9	100.9	100.9	103.4	101.3	99.1	401.3	20	20	401
11:09:22 AM	449.1	54.9	0	61	61.8	68.2	72.5	79.2	66.4	62.1	58	62.2	54	55.9	57.3	58.4	52.9	57.5	58.1	60.2	63.1	48.5	100.8	101.4	101	100.6	101.5	100.8	100.8	100.9	103.3	101.2	99.1	400.6	20	20	401
11:10:21 AM	450	54.3	0	60.2	60.9	67.2	71.2	77.9	65.4	61.1	57.2	61.3	53.5	55.2	56.7	57.7	52.4	56.8	57.4	59.5	62.3	48.2	101	101.4	101.1	100.6	101.4	101.1	100.9	101	103.2	101.4	99.2	401.3	20	20	401
11:11:20 AM	451	53.7	0	59.4	60.1	66.2	70.3	76.7	64.5	60.3	56.6	60.5	52.9	54.6	56	56.9	51.9	56.2	56.7	58.7	61.4	47.7	100.7	101.4	101	100.8	101.4	100.9	100.9	100.9	103.3	101.5	98.9	400.7	20	20	401
11:12:22 AM	452.1	53.1	0	58.6	59.2	65.2	69	75.6	63.5	59.4	55.8	59.6	52.4	53.9	55.3	56.1	51.4	55.5	56	57.9	60.6	47.5	100.8	101.4	101.3	100.7	101.5	101.1	100.9	100.9	103.2	101.3	98.9	401.2	20	20	401
11:13:21 AM	453	52.6	0	58	58.5	64.4	68	74.5	62.5	58.7	55.3	58.9	51.9	53.4	54.7	55.5	50.9	55	55.4	57.3	59.8	47.1	100.9	101.4	101.1	100.8	101.6	101.2	100.9	100.9	103.1	101.4	99	400.8	20	20	401
11:14:20 AM	454	52.1	0	57.2	57.7	63.5	67	73.3	61.6	58	54.6	58.2	51.4	52.9	54.1	55	50.5	54.3	54.8	56.6	59.1	46.8	100.9	101.4	101.2	100.4	101.6	101	100.9	100.9	103.1	101.3	99	401.7	20	20	401
11:15:22 AM	455.1	51.6	0	56.5	57	62.5	65.8	72.3	60.7	57.1	53.9	57.3	51	52.4	53.5	54.4	50.1	53.8	54.2	55.9	58.3	46.3	100.9	101.5	101	100.5	101.4	101.1	100.9	100.9	103	101.2	98.9	401.1	20	20	401
11:16:21 AM	456	51.1	0	55.9	56.3	61.7	64.9	71.2	59.8	56.4	53.3	56.7	50.5	51.8	52.9	53.7	49.7	53.2	53.7	55.4	57.7	46	102	101.5	101.3	100.5	101.6	101	100.7	100.9	103.3	101.2	99.1	400.3	20	20	401
11:17:22 AM	457.1	50.6	0	55.2	55.6	60.9	63.9	70.2	59.1	55.8	52.8	56.1	50.1	51.4	52.4	53.2	49.3	52.7	53.1	54.7	56.9	45.7	100.9	101.4	101.1	100.5	101.6	100.9	101.7	100.9	103	101.5	99.2	400.7	20	20	401
11:18:22 AM	458.1	50.2	0	54.5	55	60.1	63	69.3	58.4	55.1	52.3	55.4	49.8	51	52	52.8	49	52.2	52.7	54.2	56.3	45.4	101	101.4	101.3	100.7	101.7	101.3	101.6	101	103.2	101.2	99.2	401	20	20	401
11:19:20 AM	459	49.8	0	54	54.4	59.4	62.2	68.3	57.7	54.5	51.8	54.8	49.4	50.6	51.5	52.2	48.6	51.8	52.2	53.6	55.7	45.2	101	101.4	101.1	100.5	101.6	101.2	100.9	100.9	103.1	101.1	99	401.1	20	20	401
11:20:22 AM	460.1	49.4	0	53.5	53.8	58.6	61.3	67.4	57	54	51.3	54.2	49	50.2	51.1	51.7	48.3	51.3	51.7	53.1	55.1	44.9	100.9	101.4	101.1	100.7	101.6	101.1	100.8	100.8	103.1	101.2	99.1	401.9	20	20	401
11:21:21 AM	461	49	0	52.8	53.2	57.9	60.4	66.4	56.2	53.3	50.8	53.6	48.6	49.6	50.6	51.3	48	50.9	51.3	52.7	54.6	44.7	100.8	101.4	101.1	100.6	101.6	101.2	100.8	100.7	102.9	101.4	99.1	401.3	20	20	401
11:22:20 AM	462	48.7	0	52.4	52.7	57.3	59.7	65.6	55.6	52.8	50.4	53.1	48.3	49.3	50.2	50.9	47.7	50.5	50.9	52.2	54	44.4	101	101.4	101	100.7	101.6	101	100.8	100.9	103	101.4	98.9	400.8	20	20	401
11:23:22 AM	463.1	48.4	0	51.9	52.2	56.6	58.9	64.7	55	52.3	50	52.5	48	48.9	49.8	50.4	47.4	50.2	50.5	51.7	53.4	44.1	100.8	101.2	100.9	100.7	101.6	101.1	100.8	100.9	103	101.4	98.9	400.5	20	20	401
11:24:22 AM	464.1	48	0	51.4	51.7	55.9	58.1	63.9	54.4	51.8	49.5	52	47.6	48.6	49.4	50	47.2	49.8	50.1	51.3	53	43.9	100.8	101.3	101	100.8	101.6	101.2	100.8	101.1	103	101.2	99.2	401	20	20	401
11:25:21 AM	465	47.7	0	51	51.3	55.4	57.5	63.1	53.8	51.3	49.3	51.6	47.4	48.3	49	49.6	46.9	49.5	49.7	50.9	52.5	43.7	100.8	101.4	101.1	100.7	101.3	101.1	100.8	101.2	103	101.3	99.1	400.7	20	20	401
11:26:22 AM	466.1	47.4	0	50.5	50.8	54.8	56.8	62.3	53.3	50.9	48.8	51.1	47.1	47.9	48.7	49.2	46.6	49.1	49.4	50.5	52	43.5	100.8	101.4	100.9	100.7	101.5	101	100.8	100.9	103.1	101.3	99	401.5	20	20	401
11:27:21 AM	467	47.1	0	50.1	50.4	54.2	56.1	61.6	52.7	50.4	48.4	50.7	46.8	47.6	48.3	48.9	46.4	48.8	49.1	50.2	51.6	43.3	100.9	101.4	101.1	100.7	101.6	101.1	100.8	100.7	102.9	101.3	99	401.2	20	20	401
11:28:23 AM	468.1	46.8	0	49.7	49.9	53.6	55.5	60.9	52.2	50	48.1	50.2	46.5	47.3	48	48.5	46.1	48.4	48.7	49.8	51.1	43.1	100.8	101.4	101	100.6	101.8	101.1	100.8	100.9	103	101.4	99	400.7	20	20	401
11:29:22 AM	469.1	46.5	0	49.3	49.5	53.1	54.9	60.2	51.7	49.7	47.8	49.8	46.3	47	47.7	48.2	45.8	48.1	48.4	49.4	50.7	42.9	101	101.4	101.1	100.5	101.4	101.1	100.8	101	103	101.3	99	400.5	20	20	401
11:29:39 AM	469.3	46.4	0	49.2	49.4	53	54.7	60	51.6	49.5	47.7	49.6	46.3	46.9	47.6	48	45.7	48	48.3	49.3	50.6	42.8	100.8	101.4	101.1	100.5	101.6	101.1	100.9	101	102.9	101.2	98.9	400.4	20	20	401
11:30:21 AM	470	46.2	0	48.9	49.2	52.6	54.3	59.5	51.3	49.2	47.5	49.4	46.1	46.8	47.4	47.9	45.6	47.8	48.1	49.1	50.4	42.6	101	101.4	100.8	100.6	101.4	101.2	100.6	100.9	102.9	101.4	99.2	397.6	20	20	381.3
11:31:20 AM	471	45.8	0	48.4	48.5	51.8	53.5	58.6	50.6	48.5	46.7	48.8	45.2	45.7	46.8	47.2	44.9	47.4	47.6	48.5	49.8	40.6	100.9	101.5	101	100.6	101.5	100.9	100.6	100.9	102.8	101.4	99	361.1	20	20	351.6
11:32:21 AM	472	45.3	0	47.8	47.8	50.9	52.5	57.7	49.8	47.8	45.8	48.1	44.3	44.8	46.3	46.7	44.1	46.9	47.1	47.9	49.2	39.1	100.7	101.4	101.2	100.6	101.5	100.9	100.6	100.8	102.8	101.2	99	325.4	20	20	321
11:33:21 AM	473	44.7	0	47.2	47.2	50.2	51.5	56.7	49.1	47.2	45	47.4	43.4	44	45.6	46.1	43.3	46.5	46.6	47.3	48.7	38	100.9	101.3	100.9	100.6	101.4	100.8	100.5	100.8	102.8	101.2	99.1	293.6	20	20	291.3
11:34:20 AM	474	44.2	0	46.6	46.5	49.4	50.6	55.8	48.3	46.6	44.3	46.6	42.7	43.2	45	45.5	42.4	46	46.1	46.6	48.2	36.9	100.8	101.3	101	100.5	101.1	100.7	100.4	100.8	102.8	101	99	263.2	20	20	261.4
11:35:21 AM	475	43.6	0	45.9	45.9	48.6	49.8	54.9	47.6	45.9	43.6	46	41.9	42.5	44.3	45	41.7	45.6	45.6	46	47.6	36	100.7	101.4	100.9	100.7	101.1	100.8	100.4	100.8	102.6	100.9	99	232.6	20	20	231
11:36:21 AM	476	43	0	45.3	45.2	48	48.9	54.2	46.9	45.3	42.8	45.3	41.2	41.7	43.7	44.4	40.9	45.1	45.1	45.4	47.2	35.1	100.7	101.3	100.9	100.7	101	100.7	100.5	100.5	102.8	100.9	99.1	203.2	20	20	201.1
11:37:21 AM	477	42.4	0	44.7	44.6	47.3	48.1	53.4	46.2	44.6	42	44.8	40.5	41	43.1	43.7	40.1	44.6	44.6	44.8	46.7	34.1	100.9	101.2	100.9	100.5	101	100.5	100.3	100.6	102.6	100.9	99	174.8	20	20	171.2
11:38:22 AM	478.1	41.8	0	44.2	43.9	46.6	47.6	52.8	45.7	44.1	41.5	44.1	39.9	40.4	42.6	43.1	39.3	44.1	44.1	44.2	46.2	33.5	100.7	101.2	101	100.6	101.1	100.7	100.2	100.6	102.3	101	99.1	150.7	20	20	140.8
11:39:21 AM	479	41.4	0	43.7	43.5	46.2	47	52.4	45.3	43.7	41	43.6	39.5	40.1	42.1	42.7	38.8	43.7	43.7	43.7	45.8	33.2	100.7	101	101	100.6	100.9	100.7	100.1	100.4	102.3	100.7	99.1	132	20	20	111.1
11:40:21 AM	480	40.9	0	43.1	43.3	45.8	46.4	52	44.9	43.2	40.6	43.1	39.4	39.8	41.7	42.4	38.3	43.4	43.3	43.3	45.4	33	100.7	101.3	101	100.4	100.8	100.7	100	100.4	102.4	100.9	99.1	118.1	20	20	101

CTRM

Aero-Composites

SPECTION REPO

.\DROOP NOSE PNL\V57467051000_BOTTOM PNL 5 LH_CSN0027

Measure number 1

Operation sequence

Project name	A350 DROOP NOSE SONACA
Customer name	SONACA
Inspector name	KHAIRUL HADI/KHAIRULNIZAM
Part name	BOTTOM PANEL 5 LH
Part number	V57467051000
Part description	BOTTOM PANEL 5 LH
Drawing number	V57467051
Programme	CMM57467051_1A
Report Date	9/2/2014
Assignment	
Report no.	CAC/CMM/14-1179

Measure

Location	CTRMAC MELAKA
Operator name	KHAIRUL HADI/KHAIRULNIZAM
Machine	MORA CTRMAC 000032
CAD File no.	620002600001-00000X01_CM0336-11_&_V574 67(
Part serial number	CSN0027

HOLES POSITION

HOLE 1	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	780.174	780.223	0.048	-0.125	0.125	0.000
Y	-184.554	-184.620	-0.065	-0.125	0.125	0.000
Z	52.795	52.817	0.022	-0.125	0.125	0.000
dD	10.500	10.533	0.033	0.000	0.050	0.000

HOLE 2	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	738.213	738.272	0.059	-0.125	0.125	0.000
Y	-186.257	-186.314	-0.057	-0.125	0.125	0.000
Z	53.468	53.487	0.019	-0.125	0.125	0.000
dD	10.500	10.531	0.031	0.000	0.050	0.000

HOLE 3	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	696.249	696.318	0.069	-0.125	0.125	0.000
Y	-187.921	-187.982	-0.061	-0.125	0.125	0.000
Z	54.116	54.136	0.021	-0.125	0.125	0.000
dD	10.500	10.528	0.028	0.000	0.050	0.000

HOLE 4	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	654.287	654.336	0.049	-0.125	0.125	0.000
Y	-189.594	-189.659	-0.064	-0.125	0.125	0.000
Z	54.760	54.782	0.022	-0.125	0.125	0.000
dD	10.500	10.535	0.035	0.000	0.050	0.000

HOLE 5	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	558.891	558.936	0.046	-0.125	0.125	0.000
Y	-193.436	-193.477	-0.041	-0.125	0.125	0.000
Z	56.204	56.216	0.012	-0.125	0.125	0.000
dD	10.500	10.543	0.043	0.000	0.050	0.000

HOLE 6	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	463.495	463.529	0.034	-0.125	0.125	0.000
Y	-197.329	-197.372	-0.043	-0.125	0.125	0.000
Z	57.626	57.639	0.013	-0.125	0.125	0.000
dD	10.500	10.536	0.036	0.000	0.050	0.000

HOLE 7	Measured circle					
Proj. plane	Plane Kb 7	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	368.102	368.141	0.040	-0.125	0.125	0.000
Y	-201.273	-201.313	-0.040	-0.125	0.125	0.000
Z	59.025	59.036	0.012	-0.125	0.125	0.000
dD	10.500	10.537	0.037	0.000	0.050	0.000

HOLE 8	Measured circle					
Proj. plane	Plane Kb 8	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	272.711	272.761	0.050	-0.125	0.125	0.000
Y	-205.270	-205.320	-0.050	-0.125	0.125	0.000
Z	60.400	60.416	0.016	-0.125	0.125	0.000
dD	10.500	10.539	0.039	0.000	0.050	0.000

HOLE 9	Measured circle					
Proj. plane	Plane Kb 9	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	177.324	177.364	0.041	-0.125	0.125	0.000
Y	-209.321	-209.362	-0.041	-0.125	0.125	0.000
Z	61.757	61.769	0.012	-0.125	0.125	0.000
dD	10.500	10.541	0.041	0.000	0.050	0.000

HOLE 10	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	81.934	81.980	0.046	-0.125	0.125	0.000
Y	-213.435	-213.469	-0.034	-0.125	0.125	0.000
Z	63.092	63.101	0.009	-0.125	0.125	0.000
dD	10.500	10.531	0.031	0.000	0.050	0.000

HOLE 11	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-13.450	-13.419	0.032	-0.125	0.125	0.000
Y	-217.611	-217.617	-0.006	-0.125	0.125	0.000
Z	64.410	64.408	-0.002	-0.125	0.125	0.000
dD	10.500	10.541	0.041	0.000	0.050	0.000

HOLE 12	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-108.832	-108.785	0.046	-0.125	0.125	0.000
Y	-221.847	-221.866	-0.019	-0.125	0.125	0.000
Z	65.714	65.717	0.003	-0.125	0.125	0.000
dD	10.500	10.532	0.032	0.000	0.050	0.000

HOLE 13	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-204.210	-204.172	0.038	-0.125	0.125	0.000
Y	-226.141	-226.149	-0.008	-0.125	0.125	0.000
Z	67.003	67.001	-0.001	-0.125	0.125	0.000
dD	10.500	10.540	0.040	0.000	0.050	0.000

HOLE 14	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-299.586	-299.519	0.066	-0.125	0.125	0.000
Y	-230.489	-230.506	-0.017	-0.125	0.125	0.000
Z	68.281	68.283	0.003	-0.125	0.125	0.000
dD	10.500	10.544	0.044	0.000	0.050	0.000

HOLE 15	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-341.540	-341.502	0.038	-0.125	0.125	0.000
Y	-232.423	-232.418	0.005	-0.125	0.125	0.000
Z	68.840	68.833	-0.007	-0.125	0.125	0.000
dD	10.500	10.542	0.042	0.000	0.050	0.000

HOLE 16	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-383.493	-383.457	0.036	-0.125	0.125	0.000
Y	-234.368	-234.370	-0.002	-0.125	0.125	0.000
Z	69.396	69.392	-0.004	-0.125	0.125	0.000
dD	10.500	10.541	0.041	0.000	0.050	0.000

HOLE 17	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-425.447	-425.415	0.032	-0.125	0.125	0.000
Y	-236.230	-236.218	0.012	-0.125	0.125	0.000
Z	69.912	69.902	-0.010	-0.125	0.125	0.000
dD	10.500	10.540	0.040	0.000	0.050	0.000

HOLE 18	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.446	-451.418	0.028	-0.125	0.125	0.000
Y	-199.579	-199.567	0.012	-0.125	0.125	0.000
Z	55.167	55.156	-0.011	-0.125	0.125	0.000
dD	10.500	10.530	0.030	0.000	0.050	0.000

HOLE 19	Measured circle					
Proj. plane	Plane Kb 1	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.442	-451.414	0.029	-0.125	0.125	0.000
Y	-145.242	-145.205	0.037	-0.125	0.125	0.000
Z	34.833	34.813	-0.021	-0.125	0.125	0.000
dD	10.500	10.539	0.039	0.000	0.050	0.000

HOLE 20	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-425.441	-425.395	0.046	-0.125	0.125	0.000
Y	-114.157	-114.127	0.030	-0.125	0.125	0.000
Z	23.902	23.884	-0.018	-0.125	0.125	0.000
dD	10.500	10.549	0.049	0.000	0.050	0.000

HOLE 21	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.441	-451.395	0.047	-0.125	0.125	0.000
Y	-83.026	-83.014	0.011	-0.125	0.125	0.000
Z	13.091	13.079	-0.012	-0.125	0.125	0.000
dD	10.500	10.533	0.033	0.000	0.050	0.000

HOLE 22	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-425.440	-425.408	0.033	-0.125	0.125	0.000
Y	-34.299	-34.236	0.063	-0.125	0.125	0.000
Z	-2.942	-2.970	-0.028	-0.125	0.125	0.000
dD	10.500	10.545	0.045	0.000	0.050	0.000

HOLE 23	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.440	-451.413	0.027	-0.125	0.125	0.000
Y	14.550	14.639	0.089	-0.125	0.125	0.000
Z	-18.631	-18.666	-0.035	-0.125	0.125	0.000
dD	10.500	10.534	0.034	0.000	0.050	0.000

HOLE 24	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-425.440	-425.442	-0.002	-0.125	0.125	0.000
Y	63.600	63.652	0.053	-0.125	0.125	0.000
Z	-33.717	-33.739	-0.022	-0.125	0.125	0.000
dD	10.500	10.534	0.034	0.000	0.050	0.000

HOLE 25	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.440	-451.453	-0.013	-0.125	0.125	0.000
Y	112.699	112.760	0.061	-0.125	0.125	0.000
Z	-48.667	-48.689	-0.023	-0.125	0.125	0.000
dD	10.500	10.542	0.042	0.000	0.050	0.000

HOLE 26	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-425.439	-425.475	-0.036	-0.125	0.125	0.000
Y	144.342	144.392	0.050	-0.125	0.125	0.000
Z	-57.981	-57.999	-0.018	-0.125	0.125	0.000
dD	10.500	10.533	0.033	0.000	0.050	0.000

HOLE 27	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.438	-451.478	-0.040	-0.125	0.125	0.000
Y	175.962	176.009	0.047	-0.125	0.125	0.000
Z	-67.376	-67.392	-0.016	-0.125	0.125	0.000
dD	10.500	10.530	0.030	0.000	0.050	0.000

HOLE 28	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-451.420	-451.475	-0.056	-0.125	0.125	0.000
Y	245.074	245.126	0.052	-0.125	0.125	0.000
Z	-87.368	-87.382	-0.014	-0.125	0.125	0.000
dD	10.500	10.522	0.022	0.000	0.050	0.000

DRAIN HO	Measured circle					
Proj. plane	Plane Kb D	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-389.338	-389.352	-0.014	-0.250	0.250	0.000
Y	189.146	189.165	0.018	-0.250	0.250	0.000
Z	-70.960	-70.966	-0.007	-0.250	0.250	0.000
dD	8.000	8.489	0.489	0.000	1.000	0.000

HOLE 29	Measured circle					
Proj. plane	Plane Kb 2	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-375.753	-375.820	-0.067	-0.125	0.125	0.000
Y	219.802	219.858	0.055	-0.125	0.125	0.000
Z	-79.863	-79.880	-0.017	-0.125	0.125	0.000
dD	10.500	10.538	0.038	0.000	0.050	0.000

HOLE 30	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-300.170	-300.208	-0.038	-0.125	0.125	0.000
Y	245.657	245.688	0.031	-0.125	0.125	0.000
Z	-87.092	-87.100	-0.008	-0.125	0.125	0.000
dD	10.500	10.548	0.048	0.000	0.050	0.000

HOLE 31	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-263.086	-263.122	-0.036	-0.125	0.125	0.000
Y	220.234	220.270	0.036	-0.125	0.125	0.000
Z	-79.669	-79.680	-0.011	-0.125	0.125	0.000
dD	10.500	10.536	0.036	0.000	0.050	0.000

HOLE 32	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-263.233	-263.303	-0.070	-0.125	0.125	0.000
Y	264.929	264.965	0.036	-0.125	0.125	0.000
Z	-92.517	-92.527	-0.009	-0.125	0.125	0.000
dD	10.500	10.525	0.025	0.000	0.050	0.000

HOLE 33	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-221.085	-221.126	-0.040	-0.125	0.125	0.000
Y	220.390	220.431	0.042	-0.125	0.125	0.000
Z	-79.613	-79.626	-0.013	-0.125	0.125	0.000
dD	10.500	10.541	0.041	0.000	0.050	0.000

HOLE 34	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-221.232	-221.304	-0.071	-0.125	0.125	0.000
Y	265.082	265.122	0.040	-0.125	0.125	0.000
Z	-92.470	-92.481	-0.010	-0.125	0.125	0.000
dD	10.500	10.535	0.035	0.000	0.050	0.000

HOLE 35	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-179.232	-179.305	-0.073	-0.125	0.125	0.000
Y	265.233	265.279	0.046	-0.125	0.125	0.000
Z	-92.433	-92.445	-0.012	-0.125	0.125	0.000
dD	10.500	10.535	0.035	0.000	0.050	0.000

HOLE 36	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-137.231	-137.308	-0.076	-0.125	0.125	0.000
Y	265.382	265.416	0.035	-0.125	0.125	0.000
Z	-92.404	-92.413	-0.009	-0.125	0.125	0.000
dD	10.500	10.544	0.044	0.000	0.050	0.000

HOLE 37	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-95.084	-95.110	-0.027	-0.125	0.125	0.000
Y	220.842	220.872	0.031	-0.125	0.125	0.000
Z	-79.504	-79.514	-0.010	-0.125	0.125	0.000
dD	10.500	10.546	0.046	0.000	0.050	0.000

HOLE 38	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-95.231	-95.289	-0.058	-0.125	0.125	0.000
Y	265.527	265.549	0.022	-0.125	0.125	0.000
Z	-92.385	-92.391	-0.005	-0.125	0.125	0.000
dD	10.500	10.538	0.038	0.000	0.050	0.000

HOLE 39	Measured circle					
Proj. plane	Plane Kb 3	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-53.230	-53.306	-0.076	-0.125	0.125	0.000
Y	265.671	265.688	0.017	-0.125	0.125	0.000
Z	-92.375	-92.379	-0.004	-0.125	0.125	0.000
dD	10.500	10.535	0.035	0.000	0.050	0.000

HOLE 40	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-53.083	-53.124	-0.041	-0.125	0.125	0.000
Y	220.987	221.005	0.018	-0.125	0.125	0.000
Z	-79.486	-79.492	-0.006	-0.125	0.125	0.000
dD	10.500	10.537	0.037	0.000	0.050	0.000

HOLE 41	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-16.166	-16.243	-0.077	-0.125	0.125	0.000
Y	246.667	246.702	0.036	-0.125	0.125	0.000
Z	-86.877	-86.887	-0.010	-0.125	0.125	0.000
dD	10.500	10.530	0.030	0.000	0.050	0.000

HOLE 42	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	63.858	63.803	-0.055	-0.125	0.125	0.000
Y	221.378	221.395	0.017	-0.125	0.125	0.000
Z	-79.486	-79.492	-0.006	-0.125	0.125	0.000
dD	10.500	10.527	0.027	0.000	0.050	0.000

HOLE 43	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	143.720	143.668	-0.052	-0.125	0.125	0.000
Y	247.183	247.217	0.033	-0.125	0.125	0.000
Z	-86.941	-86.951	-0.010	-0.125	0.125	0.000
dD	10.500	10.532	0.032	0.000	0.050	0.000

HOLE 44	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	223.745	223.704	-0.041	-0.125	0.125	0.000
Y	221.881	221.884	0.003	-0.125	0.125	0.000
Z	-79.599	-79.601	-0.002	-0.125	0.125	0.000
dD	10.500	10.534	0.034	0.000	0.050	0.000

HOLE 45	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	303.606	303.594	-0.011	-0.125	0.125	0.000
Y	247.663	247.684	0.021	-0.125	0.125	0.000
Z	-87.138	-87.144	-0.006	-0.125	0.125	0.000
dD	10.500	10.537	0.037	0.000	0.050	0.000

HOLE 46	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	383.631	383.585	-0.046	-0.125	0.125	0.000
Y	222.347	222.361	0.014	-0.125	0.125	0.000
Z	-79.845	-79.850	-0.005	-0.125	0.125	0.000
dD	10.500	10.541	0.041	0.000	0.050	0.000

HOLE 47	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	463.491	463.424	-0.068	-0.125	0.125	0.000
Y	248.103	248.123	0.020	-0.125	0.125	0.000
Z	-87.475	-87.481	-0.006	-0.125	0.125	0.000
dD	10.500	10.540	0.040	0.000	0.050	0.000

HOLE 48	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	543.516	543.474	-0.042	-0.125	0.125	0.000
Y	222.771	222.807	0.036	-0.125	0.125	0.000
Z	-80.238	-80.249	-0.012	-0.125	0.125	0.000
dD	10.500	10.525	0.025	0.000	0.050	0.000

HOLE 49	Measured circle					
Proj. plane	Plane Kb 4	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	623.377	623.313	-0.064	-0.125	0.125	0.000
Y	248.501	248.507	0.007	-0.125	0.125	0.000
Z	-87.964	-87.966	-0.002	-0.125	0.125	0.000
dD	10.500	10.524	0.024	0.000	0.050	0.000

HOLE 50	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	703.402	703.372	-0.030	-0.125	0.125	0.000
Y	223.153	223.178	0.025	-0.125	0.125	0.000
Z	-80.784	-80.793	-0.009	-0.125	0.125	0.000
dD	10.500	10.531	0.031	0.000	0.050	0.000

HOLE 51	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	735.821	735.762	-0.059	-0.125	0.125	0.000
Y	248.754	248.767	0.013	-0.125	0.125	0.000
Z	-88.401	-88.405	-0.004	-0.125	0.125	0.000
dD	10.500	10.519	0.019	0.000	0.050	0.000

HOLE 52	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	768.406	768.359	-0.047	-0.125	0.125	0.000
Y	223.295	223.313	0.018	-0.125	0.125	0.000
Z	-81.051	-81.058	-0.007	-0.125	0.125	0.000
dD	10.500	10.543	0.043	0.000	0.050	0.000

HOLE 53	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	808.763	808.689	-0.074	-0.125	0.125	0.000
Y	268.017	268.058	0.041	-0.125	0.125	0.000
Z	-94.290	-94.302	-0.012	-0.125	0.125	0.000
dD	10.500	10.529	0.029	0.000	0.050	0.000

HOLE 54	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	807.269	807.269	0.000	-0.125	0.125	0.000
Y	179.559	179.586	0.027	-0.125	0.125	0.000
Z	-68.202	-68.213	-0.011	-0.125	0.125	0.000
dD	10.500	10.528	0.028	0.000	0.050	0.000

HOLE 55	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	779.240	779.228	-0.012	-0.125	0.125	0.000
Y	140.537	140.550	0.013	-0.125	0.125	0.000
Z	-56.361	-56.370	-0.008	-0.125	0.125	0.000
dD	10.500	10.534	0.034	0.000	0.050	0.000

HOLE 56	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	807.514	807.525	0.011	-0.125	0.125	0.000
Y	101.845	101.842	-0.003	-0.125	0.125	0.000
Z	-44.670	-44.675	-0.005	-0.125	0.125	0.000
dD	10.500	10.526	0.026	0.000	0.050	0.000

HOLE 57	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	779.481	779.513	0.032	-0.125	0.125	0.000
Y	62.914	62.912	-0.002	-0.125	0.125	0.000
Z	-32.573	-32.580	-0.007	-0.125	0.125	0.000
dD	10.500	10.530	0.030	0.000	0.050	0.000

HOLE 58	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	807.752	807.797	0.045	-0.125	0.125	0.000
Y	24.326	24.331	0.005	-0.125	0.125	0.000
Z	-20.546	-20.555	-0.010	-0.125	0.125	0.000
dD	10.500	10.514	0.014	0.000	0.050	0.000

HOLE 59	Measured circle					
Proj. plane	Plane Kb 5	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	779.716	779.770	0.054	-0.125	0.125	0.000
Y	-14.450	-14.468	-0.018	-0.125	0.125	0.000
Z	-8.036	-8.038	-0.003	-0.125	0.125	0.000
dD	10.500	10.528	0.028	0.000	0.050	0.000

HOLE 60	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	807.980	808.066	0.086	-0.125	0.125	0.000
Y	-52.830	-52.832	-0.002	-0.125	0.125	0.000
Z	4.592	4.584	-0.008	-0.125	0.125	0.000
dD	10.500	10.525	0.025	0.000	0.050	0.000

HOLE 61	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	779.936	780.002	0.067	-0.125	0.125	0.000
Y	-91.318	-91.341	-0.024	-0.125	0.125	0.000
Z	17.868	17.868	0.000	-0.125	0.125	0.000
dD	10.500	10.520	0.020	0.000	0.050	0.000

HOLE 62	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	808.231	808.292	0.061	-0.125	0.125	0.000
Y	-145.392	-145.455	-0.063	-0.125	0.125	0.000
Z	37.528	37.546	0.018	-0.125	0.125	0.000
dD	10.500	10.540	0.040	0.000	0.050	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.274	848.317	0.043	-0.250	0.250	0.000
Y	-181.669	-181.753	-0.084	-0.250	0.250	0.000
Z	51.627	51.657	0.030	-0.250	0.250	0.000
dD	3.000	3.625	0.625	0.000	1.000	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.268	848.341	0.073	-0.250	0.250	0.000
Y	-90.686	-90.674	0.012	-0.250	0.250	0.000
Z	17.527	17.515	-0.012	-0.250	0.250	0.000
dD	3.000	3.619	0.619	0.000	1.000	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.264	848.246	-0.018	-0.250	0.250	0.000
Y	1.384	1.397	0.014	-0.250	0.250	0.000
Z	-13.334	-13.347	-0.013	-0.250	0.250	0.000
dD	3.000	3.623	0.623	0.000	1.000	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.262	848.285	0.023	-0.250	0.250	0.000
Y	93.983	94.049	0.066	-0.250	0.250	0.000
Z	-42.393	-42.419	-0.026	-0.250	0.250	0.000
dD	3.000	3.618	0.618	0.000	1.000	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.260	848.226	-0.034	-0.250	0.250	0.000
Y	186.843	186.891	0.047	-0.250	0.250	0.000
Z	-70.539	-70.556	-0.017	-0.250	0.250	0.000
dD	3.000	3.625	0.625	0.000	1.000	0.000

PILOT HOL	Measured circle					
Proj. plane	Plane Kb 6	Num. of pts	4			
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	848.258	848.190	-0.068	-0.250	0.250	0.000
Y	279.939	279.978	0.039	-0.250	0.250	0.000
Z	-97.914	-97.924	-0.011	-0.250	0.250	0.000
dD	3.000	3.634	0.634	0.000	1.000	0.000

Posit. 1	Position point - point				
Toleranced	HOLE 1.Ac	Referencec	HOLE 1.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.169	0.250	0.000

Posit. 2	Position point - point				
Toleranced	HOLE 2.Ac	Referencec	HOLE 2.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.168	0.250	0.000

Posit. 3	Position point - point				
Toleranced	HOLE 3.Ac	Referencec	HOLE 3.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.189	0.250	0.000

Posit. 4	Position point - point				
Toleranced	HOLE 4.Ac	Referencec	HOLE 4.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.168	0.250	0.000

Posit. 5	Position point - point				
Toleranced	HOLE 5.Ac	Referencec	HOLE 5.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.125	0.250	0.000

Posit. 6	Position point - point				
Toleranced	HOLE 6.Ac	Referencec	HOLE 6.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.114	0.250	0.000

Posit. 7	Position point - point				
Toleranced	HOLE 7.Ac	Referencec	HOLE 7.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.115	0.250	0.000

Posit. 8	Position point - point				
Toleranced	HOLE 8.Ac	Referencec	HOLE 8.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.144	0.250	0.000

Posit. 9	Position point - point				
Toleranced	HOLE 9.Ac	Referencec	HOLE 9.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.118	0.250	0.000

Posit. 10	Position point - point				
Toleranced	HOLE 10.A	Referencec	HOLE 10.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.116	0.250	0.000

Posit. 11	Position point - point				
Toleranced	HOLE 11.A	Referencec	HOLE 11.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.064	0.250	0.000

Posit. 12	Position point - point				
Toleranced	HOLE 12.A	Referencec	HOLE 12.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.100	0.250	0.000

Posit. 13	Position point - point				
Toleranced	HOLE 13.A	Referencec	HOLE 13.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.077	0.250	0.000

Posit. 14	Position point - point				
Toleranced	HOLE 14.A	Referencec	HOLE 14.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.137	0.250	0.000

Posit. 15	Position point - point				
Toleranced	HOLE 15.A	Referencec	HOLE 15.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.077	0.250	0.000

Posit. 16	Position point - point				
Toleranced	HOLE 16.A	Referencec	HOLE 16.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.072	0.250	0.000

Posit. 17	Position point - point				
Toleranced	HOLE 17.A Referencec		HOLE 17.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.072	0.250	0.000

Posit. 18	Position point - point				
Toleranced	HOLE 18.A Referencec		HOLE 18.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.065	0.250	0.000

Posit. 19	Position point - point				
Toleranced	HOLE 19.A Referencec		HOLE 19.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.103	0.250	0.000

Posit. 20	Position point - point				
Toleranced	HOLE 20.A Referencec		HOLE 20.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.116	0.250	0.000

Posit. 21	Position point - point				
Toleranced	HOLE 21.A Referencec		HOLE 21.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.099	0.250	0.000

Posit. 22	Position point - point				
Toleranced	HOLE 22.A Referencec		HOLE 22.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.153	0.250	0.000

Posit. 23	Position point - point				
Toleranced	HOLE 23.A Referencec		HOLE 23.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.199	0.250	0.000

Posit. 24	Position point - point				
Toleranced	HOLE 24.A Referencec		HOLE 24.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.114	0.250	0.000

Posit. 25	Position point - point				
Toleranced	HOLE 25.A Referencec		HOLE 25.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.134	0.250	0.000

Posit. 26	Position point - point				
Toleranced	HOLE 26.A Referencec		HOLE 26.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.129	0.250	0.000

Posit. 27	Position point - point				
Toleranced	HOLE 27.A Referencec		HOLE 27.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.128	0.250	0.000

Posit. 28	Position point - point				
Toleranced	HOLE 28.A Referencec		HOLE 28.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.155	0.250	0.000

Posit. DRA	Position point - point				
Toleranced	DRAIN HO	Referencec	DRAIN HOLE.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.048	0.500	0.000

Posit. 29	Position point - point				
Toleranced	HOLE 29.A	Referencec	HOLE 29.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.177	0.250	0.000

Posit. 30	Position point - point				
Toleranced	HOLE 30.A	Referencec	HOLE 30.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.099	0.250	0.000

Posit. 31	Position point - point				
Toleranced	HOLE 31.A	Referencec	HOLE 31.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.104	0.250	0.000

Posit. 32	Position point - point				
Toleranced	HOLE 32.A	Referencec	HOLE 32.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.159	0.250	0.000

Posit. 33	Position point - point				
Toleranced	HOLE 33.A	Referencec	HOLE 33.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.119	0.250	0.000

Posit. 34	Position point - point				
Toleranced	HOLE 34.A	Referencec	HOLE 34.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.165	0.250	0.000

Posit. 35	Position point - point				
Toleranced	HOLE 35.A	Referencec	HOLE 35.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.175	0.250	0.000

Posit. 36	Position point - point				
Toleranced	HOLE 36.A	Referencec	HOLE 36.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.169	0.250	0.000

Posit. 37	Position point - point				
Toleranced	HOLE 37.A	Referencec	HOLE 37.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.084	0.250	0.000

Posit. 38	Position point - point				
Toleranced	HOLE 38.A	Referencec	HOLE 38.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.124	0.250	0.000

Posit. 39	Position point - point				
Toleranced	HOLE 39.A	Referencec	HOLE 39.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.156	0.250	0.000

Posit. 40	Position point - point				
Toleranced	HOLE 40.A	Referencec	HOLE 40.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.090	0.250	0.000

Posit. 41	Position point - point				
Toleranced	HOLE 41.A	Referencec	HOLE 41.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.171	0.250	0.000

Posit. 42	Position point - point				
Toleranced	HOLE 42.A	Referencec	HOLE 42.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.116	0.250	0.000

Posit. 43	Position point - point				
Toleranced	HOLE 43.A	Referencec	HOLE 43.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.124	0.250	0.000

Posit. 44	Position point - point				
Toleranced	HOLE 44.A	Referencec	HOLE 44.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.081	0.250	0.000

Posit. 45	Position point - point				
Toleranced	HOLE 45.A	Referencec	HOLE 45.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.049	0.250	0.000

Posit. 46	Position point - point				
Toleranced	HOLE 46.A	Referencec	HOLE 46.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.097	0.250	0.000

Posit. 47	Position point - point				
Toleranced	HOLE 47.A	Referencec	HOLE 47.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.142	0.250	0.000

Posit. 48	Position point - point				
Toleranced	HOLE 48.A	Referencec	HOLE 48.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.113	0.250	0.000

Posit. 49	Position point - point				
Toleranced	HOLE 49.A	Referencec	HOLE 49.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.128	0.250	0.000

Posit. 50	Position point - point				
Toleranced	HOLE 50.A	Referencec	HOLE 50.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.080	0.250	0.000

Posit. 51	Position point - point				
Toleranced	HOLE 51.A	Referencec	HOLE 51.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.120	0.250	0.000

Posit. 52	Position point - point				
Toleranced	HOLE 52.A	Referencec	HOLE 52.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.101	0.250	0.000

Posit. 53	Position point - point				
Toleranced	HOLE 53.A	Referencec	HOLE 53.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.170	0.250	0.000

Posit. 54	Position point - point				
Toleranced	HOLE 54.A	Referencec	HOLE 54.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.058	0.250	0.000

Posit. 55	Position point - point				
Toleranced	HOLE 55.A	Referencec	HOLE 55.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.038	0.250	0.000

Posit. 56	Position point - point				
Toleranced	HOLE 56.A	Referencec	HOLE 56.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.025	0.250	0.000

Posit. 57	Position point - point				
Toleranced	HOLE 57.A	Referencec	HOLE 57.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.065	0.250	0.000

Posit. 58	Position point - point				
Toleranced	HOLE 58.A	Referencec	HOLE 58.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.092	0.250	0.000

Posit. 59	Position point - point				
Toleranced	HOLE 59.A	Referencec	HOLE 59.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.113	0.250	0.000

Posit. 60	Position point - point				
Toleranced	HOLE 60.A	Referencec	HOLE 60.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.173	0.250	0.000

Posit. 61	Position point - point				
Toleranced	HOLE 61.A	Referencec	HOLE 61.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.141	0.250	0.000

Posit. 62	Position point - point				
Toleranced	HOLE 62.A	Referencec	HOLE 62.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.179	0.250	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 1.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.199	0.500	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 2.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.150	0.500	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 3.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.052	0.500	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 4.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.149	0.500	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 5.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.122	0.500	0.000

Posit. PILO	Position point - point				
Toleranced	PILOT HOI	Referencec	PILOT HOLE 6.Nominal		
	Nominal	Actual	Deviation	Upper tol.	Out of Tol.
Deviation			0.157	0.500	0.000

EOP

KC 1	Surface point					
Surface	20					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	859.287	859.293	0.006	-0.500	0.500	0.000
Y	264.887	264.887	-0.000	-0.500	0.500	0.000
Z	-95.368	-95.368	-0.000	-0.500	0.500	0.000

KC 2	Surface point					
Surface	20					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	859.287	859.375	0.088	-0.500	0.500	0.000
Y	150.623	150.623	-0.000	-0.500	0.500	0.000
Z	-61.095	-61.095	-0.000	-0.500	0.500	0.000

KC 3	Surface point					
Surface	20					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	859.284	859.433	0.148	-0.500	0.500	0.000
Y	-33.299	-33.299	-0.000	-0.500	0.500	0.000
Z	-2.805	-2.805	-0.000	-0.500	0.500	0.000

KC 4	Surface point					
Surface	20					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	859.280	859.426	0.146	-0.500	0.500	0.000
Y	-144.225	-144.225	-0.000	-0.500	0.500	0.000
Z	37.260	37.260	-0.000	-0.500	0.500	0.000

KC 5	Surface point					
Surface	172					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	755.951	755.963	0.012	-0.500	0.500	0.000
Y	-206.675	-206.947	-0.272	-0.500	0.500	0.000
Z	59.611	59.724	0.113	-0.500	0.500	0.000

KC 6	Surface point					
Surface	17					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	476.392	476.404	0.012	-0.500	0.500	0.000
Y	-218.037	-218.283	-0.246	-0.500	0.500	0.000
Z	63.576	63.678	0.102	-0.500	0.500	0.000

KC 7	Surface point					
Surface	17					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	193.468	193.483	0.015	-0.500	0.500	0.000
Y	-229.544	-229.858	-0.314	-0.500	0.500	0.000
Z	68.465	68.596	0.131	-0.500	0.500	0.000

KC 8	Surface point					
Surface	172					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-89.996	-89.983	0.013	-0.500	0.500	0.000
Y	-242.108	-242.371	-0.263	-0.500	0.500	0.000
Z	71.957	72.067	0.110	-0.500	0.500	0.000

KC 9	Surface point					
Surface	172					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-370.436	-370.424	0.011	-0.500	0.500	0.000
Y	-254.941	-255.160	-0.219	-0.500	0.500	0.000
Z	75.550	75.642	0.092	-0.500	0.500	0.000

KC 10	Surface point					
Surface	18					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-473.438	-473.406	0.031	-0.500	0.500	0.000
Y	-201.802	-201.802	0.000	-0.500	0.500	0.000
Z	54.210	54.210	0.000	-0.500	0.500	0.000

KC 11	Surface point					
Surface	174					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-473.433	-473.435	-0.003	-0.500	0.500	0.000
Y	-68.907	-68.907	-0.000	-0.500	0.500	0.000
Z	6.005	6.005	-0.000	-0.500	0.500	0.000

KC 12	Surface point					
Surface	174					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-473.432	-473.485	-0.053	-0.500	0.500	0.000
Y	113.652	113.651	-0.000	-0.500	0.500	0.000
Z	-51.118	-51.118	-0.000	-0.500	0.500	0.000

KC 13	Surface point					
Surface	174					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-473.428	-473.509	-0.081	-0.500	0.500	0.000
Y	253.445	253.445	-0.000	-0.500	0.500	0.000
Z	-92.927	-92.927	-0.000	-0.500	0.500	0.000

KC 14	Surface point					
Surface	19					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-371.512	-371.512	-0.001	-0.500	0.500	0.000
Y	313.288	313.420	0.132	-0.500	0.500	0.000
Z	-110.425	-110.462	-0.037	-0.500	0.500	0.000

KC 15	Surface point					
Surface	19					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	-85.550	-85.550	-0.001	-0.500	0.500	0.000
Y	314.724	314.839	0.114	-0.500	0.500	0.000
Z	-110.246	-110.278	-0.032	-0.500	0.500	0.000

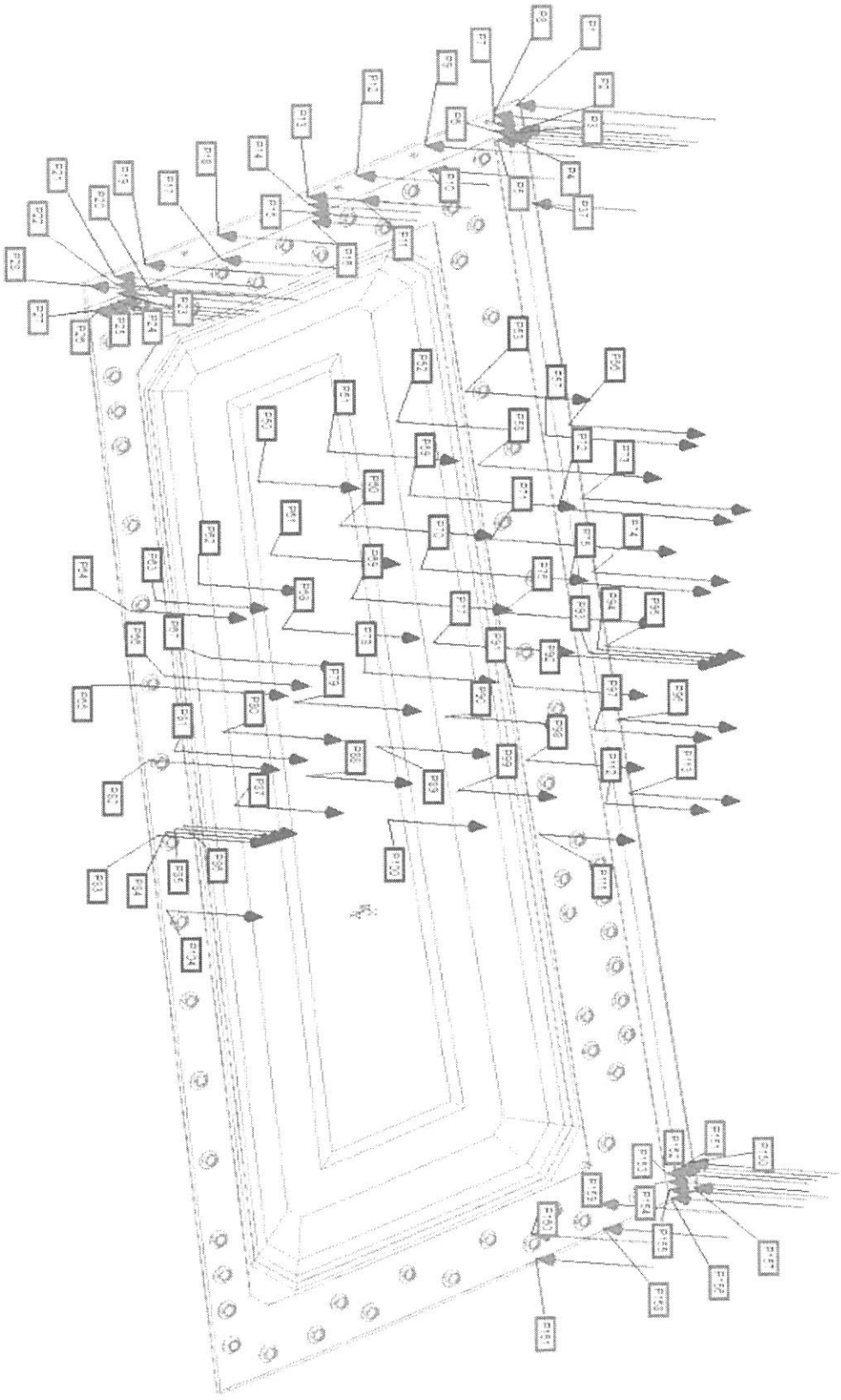
KC 16	Surface point					
Surface	19					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	191.351	191.351	-0.001	-0.500	0.500	0.000
Y	316.027	316.132	0.105	-0.500	0.500	0.000
Z	-110.390	-110.419	-0.030	-0.500	0.500	0.000

KC 17	Surface point					
Surface	19					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	474.762	474.761	-0.000	-0.500	0.500	0.000
Y	317.188	317.288	0.100	-0.500	0.500	0.000
Z	-111.138	-111.166	-0.028	-0.500	0.500	0.000

KC 18	Surface point					
Surface	19					
	Nominal	Actual	Deviation	Lower tol.	Upper tol.	Out of Tol.
X	759.376	759.375	-0.001	-0.500	0.500	0.000
Y	318.341	318.458	0.116	-0.500	0.500	0.000
Z	-111.920	-111.953	-0.033	-0.500	0.500	0.000

SUMMARY

Execution time	13mn 28s	
Mean deviation	0.038	
Maximum deviation	0.634	
Maximum signed deviation	0.634	PILOT HOLE 6
Minimum signed deviation	-0.314	KC 7
Out of tol. percentage	0%	
Mean out of tol.	0	
Maximum out of tol.	0	None
Minimum out of tol.	0	None
Num. of actions out of tol.	0	



CTRM AERO COMPOSITES	TECHNIQUE SHEET
WORKING DOCUMENT NO: CTRMAC SONACA TECH 0004	**ISSUE:** 7

TITLE: AUTOMATED ULTRASONIC THROUGH TRANSMISSION INSPECTION (SQUIRTER TECHNIQUE) FOR A350XWB DROOP NOSE BOTTOM PANEL

PART DESCRIPTION: A350XWB DROOP NOSE BOTTOM PANEL

PROJECT: A350XWB

RELATED DOCUMENTS:

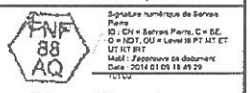
AITM 6-0011; Non Destructive Inspection of Composite Parts.
AITM 6-0012; Reference Standards for NDT Methods on Fibre Composites.
AITM 6-0013; Evaluation of Conventional Ultrasonic Inspection Facilities, Equipment and Probes.
AITM 6-4002; Ultrasonic Through Transmission Inspection of Fibre Composite.
CTRMAC Procedure: CAP05-302; Qualification and Certification of CTRMAC NDT Personnel.
CTRMAC Procedure: CAP05-303; NDT Calibration and Transducer.
CTRMAC Procedure: CAP05-305; CTRMAC NDT Data Storage and Record Retention
CTRMAC Procedure: CAP05-314; NDT Inspection Methods for A350XWB Programs.
A1083; Qualification and Approval/ Certification of Personnel for Non-Destructive Testing.
CTRMAC SONACA TECH 0006; Manual Ultrasonic Pulse Echo Inspection for A350XWB Droop Nose Bottom Panel

DRAWING NUMBERS:

Refer to Section 2.1

INSTRUCTIONS:

This Technique Sheet must be approved by the CTRMAC Level 3 and accepted by SONACA Level 3 at Issue 1 and all subsequent re-issues or emergency amendments.

DATE	8th Jan 2014	8th Jan 2014	
SIGNATURE	Prepared	Approved	Customer Acceptance
			
PRINT NAME	Mohd Irwan Shah	Tom Cairnduff	Pierre Servais
POSITION	CTRMAC - UT LEVEL 2	CTRMAC - UT LEVEL 3	SONACA – UT LEVEL 3
DEPARTMENT	NDT		SONACA

CTRM AERO COMPOSITES	TECHNIQUE SHEET
WORKING DOCUMENT NO: CTRMAC SONACA TECH 0004	**ISSUE:** 7

TITLE: AUTOMATED ULTRASONIC THROUGH TRANSMISSION INSPECTION (SQUIRTER TECHNIQUE) FOR A350XWB DROOP NOSE BOTTOM PANEL

PART DESCRIPTION: A350XWB DROOP NOSE BOTTOM PANEL

PROJECT: A350XWB

RELATED DOCUMENTS:

AITM 6-0011; Non Destructive Inspection of Composite Parts.
AITM 6-0012; Reference Standards for NDT Methods on Fibre Composites.
AITM 6-0013; Evaluation of Conventional Ultrasonic Inspection Facilities, Equipment and Probes.
AITM 6-4002; Ultrasonic Through Transmission Inspection of Fibre Composite.
CTRMAC Procedure: CAP05-302; Qualification and Certification of CTRMAC NDT Personnel.
CTRMAC Procedure: CAP05-303; NDT Calibration and Transducer.
CTRMAC Procedure: CAP05-305; CTRMAC NDT Data Storage and Record Retention
CTRMAC Procedure: CAP05-314; NDT Inspection Methods for A350XWB Programs.
A1083; Qualification and Approval/ Certification of Personnel for Non-Destructive Testing.
CTRMAC SONACA TECH 0006; Manual Ultrasonic Pulse Echo Inspection for A350XWB Droop Nose Bottom Panel

DRAWING NUMBERS:

Refer to Section 2.1

INSTRUCTIONS:

This Technique Sheet must be approved by the CTRMAC Level 3 and accepted by SONACA Level 3 at Issue 1 and all subsequent re-issues or emergency amendments.

DATE	8th Jan 2014	8th Jan 2014	10th Jan 2014
	Prepared	Approved	Customer Acceptance
SIGNATURE			 CTRMAC SONACA TECH 0004 Issue 7 - !
PRINT NAME	Mohd Irwan Shah	Tom Cairnduff	Pierre Servais
POSITION	CTRMAC - UT LEVEL 2	CTRMAC - UT LEVEL 3	SONACA – UT LEVEL 3
DEPARTMENT	NDT		SONACA

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LIST OF TABLES

LIST OF FIGURES

APPENDIX LIST

1.0 Introduction

1.1 This technique defines the NDT requirements for the inspection of A350XWB Droop Nose Bottom Panel.

1.2 Personnel performing NDT with this technique are required to be approved to AT LEAST Level 2 in accordance with CAP05-302: Qualification and Certification of CTRMAC NDT Personnel and A1083: Qualification and Approval/ Certification of Personnel for Non-Destructive Testing.

1.3 CTRMAC Level 3 shall approve all techniques raised for NDT inspection of such components. The techniques shall be submitted to Sonaca for technical acceptance and to obtain any further approvals from Airbus.

1.4 This technique will detect all defects in accordance with AITM 6-4002 conditions which cause attenuation of the through transmitted ultrasonic signal.

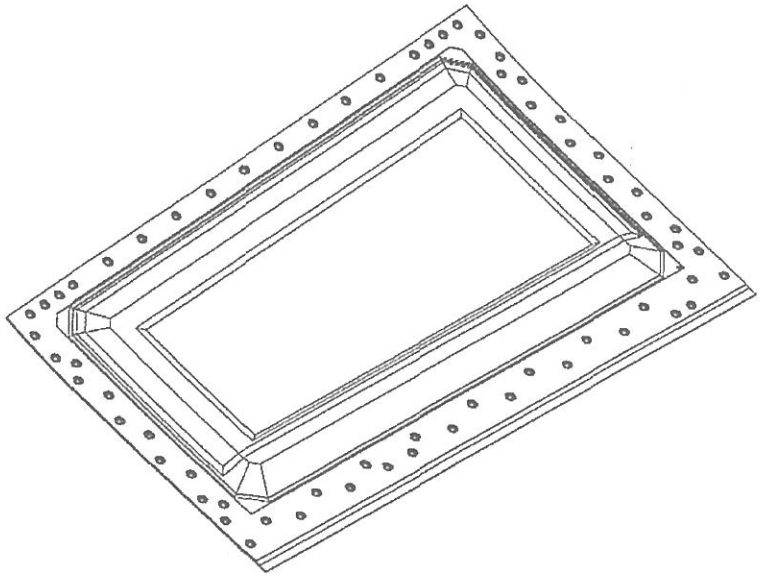
2.0 Component Information

2.1 The list of applicable component related to this technique is contained in Table 1.

Table 1: Component Details

PART NO.	PART DESCRIPTION
V5746601200 000/100	A350XWB Bottom Panel 1 LH/RH
V5746602200 000/100	A350XWB Bottom Panel 2 LH/RH
V5746603200 000/100	A350XWB Bottom Panel 3 LH/RH
V5746604200 000/100	A350XWB Bottom Panel 4 LH/RH
V5746705100 000/100	A350XWB Bottom Panel 5 LH/RH

Figure 1: Representation of Part Configuration



Bottom Panel 2

3.0 Type of Inspection Equipment, Probes, Accessories and Ancillary Material

3.1 Equipment

Manufacture	Midas NDT	
Type	Flatbed (Horizontal Scanner)	Vertical Scanner
Serial Number	CTRMAC 020012	CTRMAC 020011
Number of Axes	2	5
Number of Channels	3	1

3.2 Probe

Type	Immersion
Manufacture	Midas/ Britek SA, Inc.
Frequency	2.5MHz
Diameter	15mm
Connector Type	BNC
Cable Type	BNC-BNC

3.3 Couplant

Type	Water

3.4 Jet Housing

Nozzle Size	6-8mm
Filter	Metal Mesh Filter

4.0 Pre-Inspection Requirement

4.1 Visually inspect the received components prior to inspection for signs of damage, delaminations and disbonds. Open edge damages shall be sealed before inspection to prevent couplant intrusion.

4.2 All components must be cleaned as necessary to ensure they are free from dust and dirt. Immerse the components into wetting bath before placing on to the scanning frame. For big parts, wipe across both surfaces.

4.3 The components are to be placed on the scanning frame in a similar manner as the reference panel with respect to water jet incidence to panel surface.

4.4 Surface mounted attenuative material such as foam or lead tabs may be used as marker to verify scanned area coverage.

5.0 Inspection Requirement

5.1 The procedures for all NDT methods are contained within CTRMAC document CAP05-314: NDT Inspection Methods for A350XWB Programs.

5.2 The following inspection techniques are applicable for this technique sheet:

5.2.1 CAC-PR-01: C-scan Automated Through Transmission – Squirter

5.3 The C-Scan Automated Through Transmission parameters required to inspect the components applicable to this technique sheet are contained in Table 2. C-Scan will provide primary method for 100% inspection of all components applicable to this technique.

Table 2: Setup Parameters

Parameter	Value
Scan Speed	420 mm/sec
Scan Index	3mm
Transmitter	1
Amplitude Signal	Log
Signal received	Low Res
PRF	0.1KHz
Water Path	Optimised distance – typically 250-300mm

5.4 Create the instrument calibration graph after optimizing the probe water path distance as per the instructions set out in CAP05-303. Use this file for the inspection process.

5.5 The reference panel specific to this technique are contained in Table 3. The applicable reference panel shall be scanned simultaneously with the inspected panels.

Table 3: Reference Panel Details

Reference Panel ID	Description	Type
RS-2-CTRMAC-SW-SON-001	*A350XWB Bottom Panel*	2

5.6 The scanning speed shall not exceed that which will consistently and reliably detect the defects contained within the reference panels.

6.0 Post-Inspection Requirement

6.1 The scan image can only be accepted if all artificial defects contained within the reference standard are detectable. Failure to comply with this requirement must result in complete re-scan components.

6.2 Any portion of the C-Scan that contains non-readable data information due to excessive water splash or other reason can be checked by the secondary technique as per technique sheet CTRMAC SONACA TECH 0006 for evaluation, identification and sizing in accordance with AITM6-4005. Place a comment on the original C-Scan to this effect.

6.3 Any relevant indication found with this inspection technique shall be checked by secondary technique as per technique sheet CTRMAC SONACA TECH 0006 for evaluation, identification and sizing in accordance with AITM6-4005.

7.0 Transfer Value

7.1 Permissible transfer value between the applicable reference standard and the inspected components shall be within the range indicated in Table 4.

7.2 Any excessive transfer value above that shown in Table 4 shall be recorded and reported to the Responsible Level 3 who will determine if the reasons for the excessive deviation are understood and can be accepted.

Table 4: Permitted Transfer Values in dB

Material Construction	*Transfer Value*
Laminate	±3dB
Sandwich	±6dB

8.0 Interpretation

8.1 Laminate areas with attenuation levels exceeding those shown in Table 5 shall be further inspected using the A-scan manual pulse echo technique (MUPE) CTRMAC SONACA TECH 0006 for identification and sizing of indication.

8.2 Sandwich areas with attenuation levels exceeding those shown in Table 5 shall be further inspected to confirm the location of the defect. If this cannot be confirmed then it should be marked up as a UUI.

Table 5: Attenuation Criteria for Through Transmission

Material Construction	Threshold Value
	All Defect Types
Laminate	4dB
Sandwich	12dB

9.0 Acceptance Standard

9.1 Evaluate all indications in accordance with **AITM6-0011 class IV**. Table 6 details the acceptance criteria for each defect parameter.

9.2 Indications that have a discernible shape above background level but within the accepted attenuation criteria shall be investigated for possible foreign inclusions.

9.3 Indications which cannot be sized either by means of the above criteria shall be considered as unidentified indications UUI.

Table 6: Acceptance Criteria for Class IV

Defect Parameter	Characteristic
Area of defect	≤700mm^2
Length of defect (L) (See Note 1)	≤46mm
Local Density in 200mmØ (See Note 2)	≤7%
Local Density in 300mm long area (See Note 2)	≤4%
Overall Density (S_t)	≤1%
Proximity rule for all indications of minimum detectable size or larger	$D_{12} > 2.5L_{max}$: Two individual relevant indications shall not be grouped
	$D_{12} \leq 2.5L_{max}$: Two individual relevant indications shall be grouped

Note 1: If indication sits at the edge of laminate (e.g.: Part edge or stringer foot edge), the characteristic length "L" shall be defined parallel to the edge of the structure

Note 2: Local density criteria shall not be applicable to parts whose total area is smaller than *40.000mm^2*

Note 3: In an area where 200mmØ cannot be used, the percentage of area affected by relevant indications along the long-area shall be reported

Where:

(L) The maximum length (i.e.: characteristic length) of the relevant indication. It define the long side circumscribed rectangle

(S_t) Percentage of area affected by relevant indications with regards the total part area

(L_{max}) The maximum of characteristic length of the individual relevant indications

10.0 Inspection Report

10.1 Report and record all flaw detected during the inspection.

10.2 Prepare report to the requirement of AITM6-0011 and CER document.

10.3 Identify defective part clearly and quarantine the part for further reviewing.

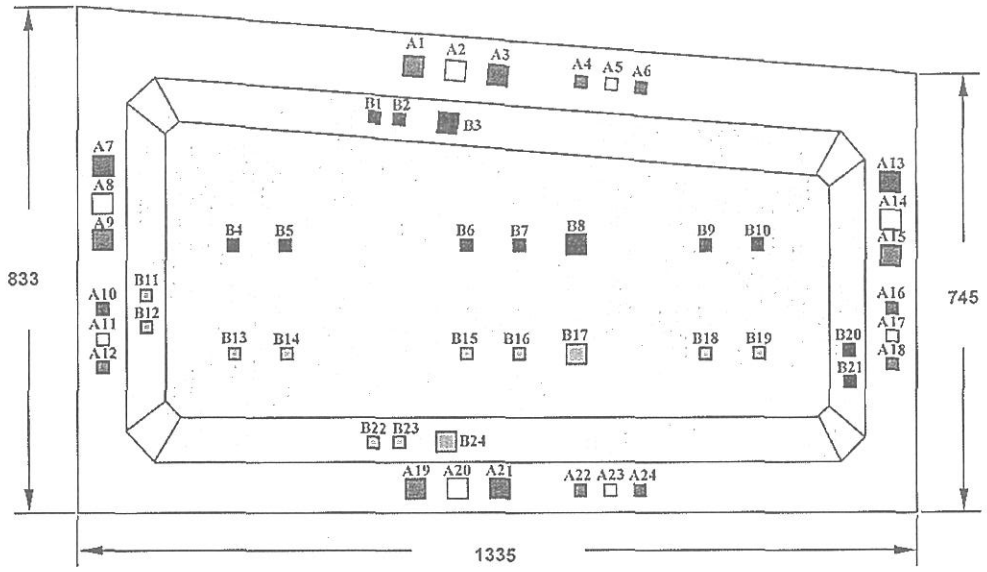
11.0 Data Storage

11.1 As per CAP05-305; CTRMAC NDT data storage and record retention document.

12.0 Amendment Record

Issue	Date	Description	Amendment by
1	21 Sept 2011	New	Irwan Shah
2	19 Dec 2011	i. Revise title, part description ii. Add related document iii. Revise 1.3, 1.4 iv. Revise 3.3 v. Revise Table 2, Table 4 vi. Add 5.5 vii. Add 6.3 viii. Add 7.3 ix. Add 8.1, 8.2, 8.3 x. Revise 9.1 xi. Revise 11.1, 11.2 xii. Revise Appendix 2, add Appendix 3, Appendix 4, Appendix 5	Irwan Shah
3	22 Feb 2012	i. Revise Table 3 ii. Revise 5.4 iii. Revise Appendix 2, Appendix 3, remove Appendix 4, Appendix 5	Irwan Shah
4	07 Jun 2012	i. Revise 1.4, 3.3, 3.4, 9.1, 10.1, 10.2, 10.3, 10.4, 10.5 ii. Revise Table 2, Table 4 iii. Remove 11.3, 11.4, 11.5, 11.6 iv. Revise Appendix 1	Irwan Shah
5	14 Dec 2012	Revise Table 1; Component details	Irwan Shah
6	24 Oct 2013	i. Technique sheet fully revised with new CTRM NDT format ii. Remove the USL Twin Tower information and replace with MIDAS Flat Bed/ Vertical Scanner iii. Revise Tables 1 iv. Revise 7.0 v. Revise 8.0 vi. Add 9.0	Irwan Shah
7	08 Jan 2014	i. Revise Table 1 ii. Revise Table 2; scan index	Irwan Shah

Appendix 1: RS-2-CTRMAC-SW-SON-001



Note:
1. Drawing not to scale
2. All dimension in mm unless otherwise specified.
3. Reference standard is manufacture as per AITM6-0012.
4. Manufacture of reference standard using similar material, range of thickness, configuration, surface finish, geometry and manufacturing processes used to manufacture A350XWB Droop Nose, Bottom Panel of panel 2RH.
5. Distance between each artificial defect to EOP core ramp is minimum 25mm unless otherwise specified.

RS-2-CTRMAC-SW-SON-001
Defect Configuration at Monolithic Area

Defect	Defect Type And Size	Defect Location	Defect ID
■	PTFE (6mm x 6mm)	Between 2nd and 3rd plies from Tool Side	A4, A12, A18, A22
		At mid thickness of plies	A5, A11, A17, A23
□		Between 2nd and 3rd plies from Bag Surface	A6, A10, A16, A24
■	Separator film (25mm x 25mm)	Between 2nd and 3rd plies from Tool Side	A1, A9, A15, A19
		At mid thickness of plies	A2, A8, A14, A20
		Between 2nd and 3rd plies from Bag Surface	A3, A7, A13, A21

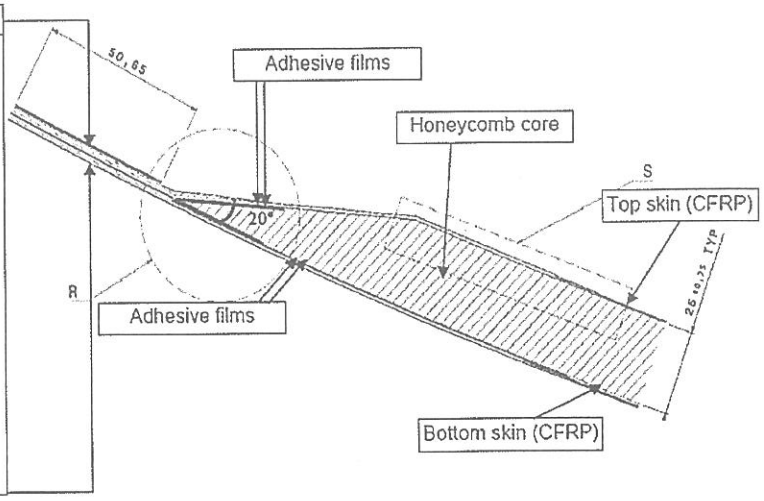
RS-2-CTRMAC-SW-SON-001
Defect Configuration at Sandwich Area

Defect	Defect Type And Size	Defect Location	Defect ID
■	PTFE (10mm x 10mm)	Between adhesive to core at Tool Side	B1, B4, B6, B9, B20
		Between two plies closed to the Tool Surface	B2, B5, B7, B10, B21
		Between adhesive to core at Bag Side	B11, B13, B15, B18, B22
▣		Between two plies closed to the Bag Surface	B12, B14, B16, B19, B23
	Separator film (25mm x 25mm)	Between adhesive to core at Tool Side	B3, B8
		Between adhesive to core at Bag Side	B17, B24

Cross Section and Thickness Information

Monolithic area (CFRP)

Ply n°	Mat.	Dir.	Thk.
17	GFRP	-	0.25
16	CFRP	0°	0.280
15	CFRP	+45°	0.280
14	CFRP	-45°	0.280
13	CFRP	0°	0.280
12	CFRP	+45°	0.280
11	CFRP	-45°	0.280
10	CFRP	0°	0.280
9	CFRP	0°	0.280
8	CFRP	-45°	0.280
7	CFRP	+45°	0.280
6	CFRP	0°	0.280
5	CFRP	-45°	0.280
4	CFRP	+45°	0.280
3	CFRP	0°	0.280
2	Cop. mesh	-	0.06
1	Surf. film	-	0.17



CTRM Aero Composites Sdn Bhd		
NDT	**ULTRASONIC INSPECTION REPORT**	ACT-SON-DN-FAI-033

Program / Project	A350 SONACA DROOP NOSE

Part Description	A350 DROOP NOSE BOTTOM PANEL 5 LH
Part ID	V57467051000-000
CSN No	0027
NCR Number	NA
Technique Sheet	CTRMAC/SONACA TECH 0004/0006
Specification/ Category/ Class	AITM6-0011

Inspector	SHAH
Sign/ stamp	NDT 23
Inspection Date	06th March 2014
Report Date	31st March 2014
Scan ID	MX1-14-0270

Inspection Parameter

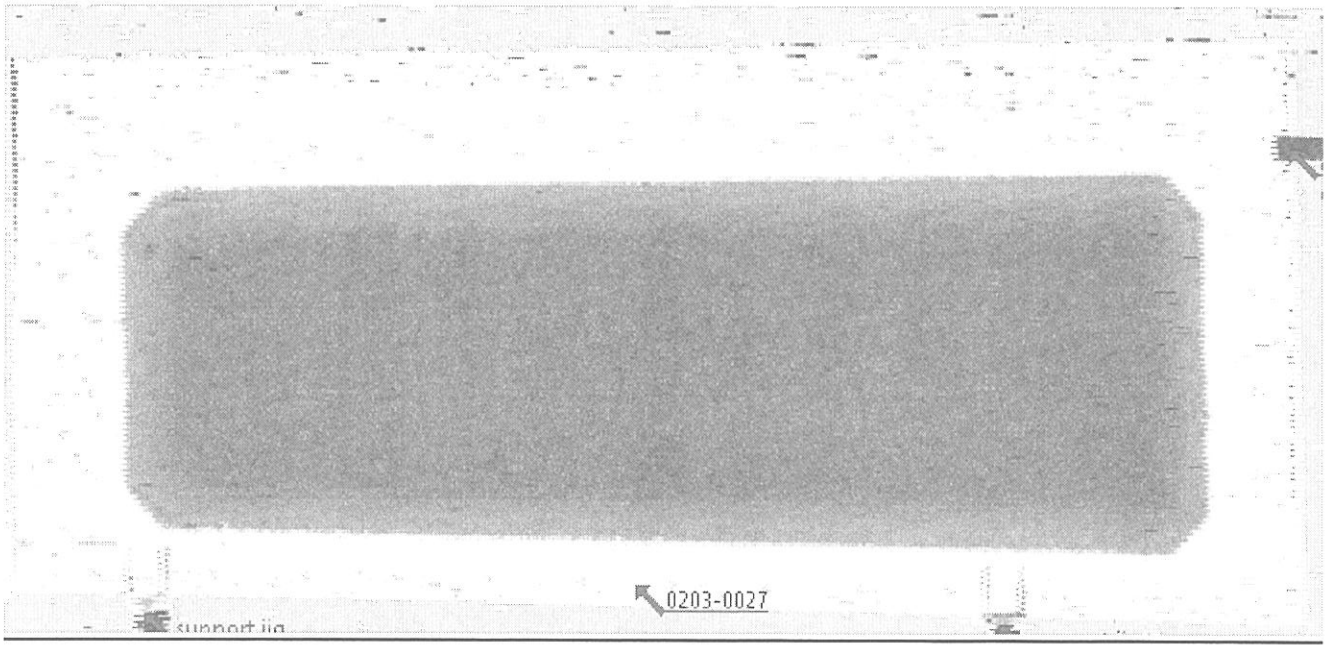
Equipment	MIDAS Multi-Axis System
Technique	AUTT
Transducer	2.5MHz
Threshold	4dB, 12dB

Reference Panel	RS-2-CTRMAC-SW-SON-001
Scan speed	420 mm/s
Scan index	2 mm
Exceeds	NA

Evaluation Details

No defect noted from primary AUTT inspection.
All c-scan indication checked by a-scan manual pulse echo reveals no-relevant indications.

Scan Data

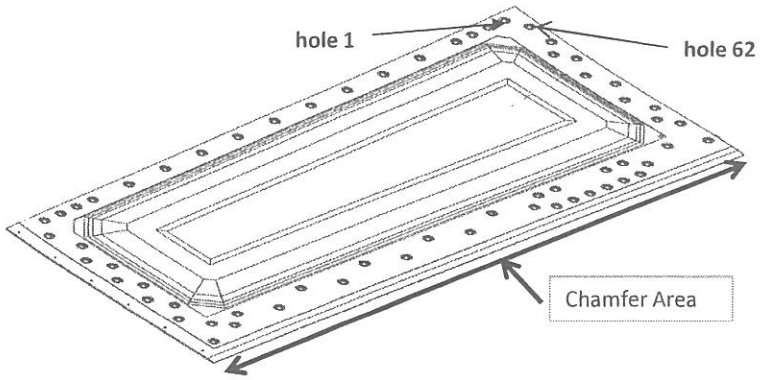


CTAM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB SONACA		
Part name	BOTTOM PANEL 5 (LH) / RH		
Part number	V57467051 000 00	**Qty**	1
G.R # / Work Order Router	A350S- 0203 - 0027		
Process area	CNC		
Vendor / Customer name	SONACA		
Vendor / Customer part number	V57467051		
Batch / lot / Serial number	0027		
Inspected by	ZULMIFAH	**Issue**	
Drawing number	V57467051	**a) Drawing sheet : A00**	
		b) Revision : A.2	

Diagram :



No	Criteria	Area / Location	Standard / Requirement	Point of inspection															Accept / Reject
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
				A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
				16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
				A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
				31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
1	SLEEVE HOLE (62 hole)	AS PER DIAGRAM	Ø10.5 +0.05 , -0 MIN = Ø10.5mm MAX = Ø10.55mm	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
				46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
				A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
				61	62														
				A	A														
				1															
2	DRAIN HOLE (1 hole)	AS PER DIAGRAM	Ø8.50 ± 0.5 MIN = Ø8.0mm MAX = Ø9.0mm	A															A
				1	2	3	4	5	6										
3	PILOT HOLE (6 hole)	AS PER DIAGRAM	3.55 ~ 3.65 mm	A	A	A	A	A	A										A
				1	2	3	4	5	6										
4	Thickness Edge Chamfer	Chamfer Area	1.5 ± 0.5 mm	1.65	1.60	1.55	1.50	1.60	1.64										A
				1	2	3													
5	Width of chamfer	Chamfer Area	16.7± 0.5 mm	16.56	16.50	16.57													A

QC Comments :

After complete drill panel: Visual Check for each hole on Burr, Overheating, Contamination on hole and Scoring / Scratching.
Hole Diameter Inspect use Go No Go ID :
Width and thickness chamfer inspect use Vernier Caliper. ID: 140804

AC 138 INSP 23702
QC Stamp & Date

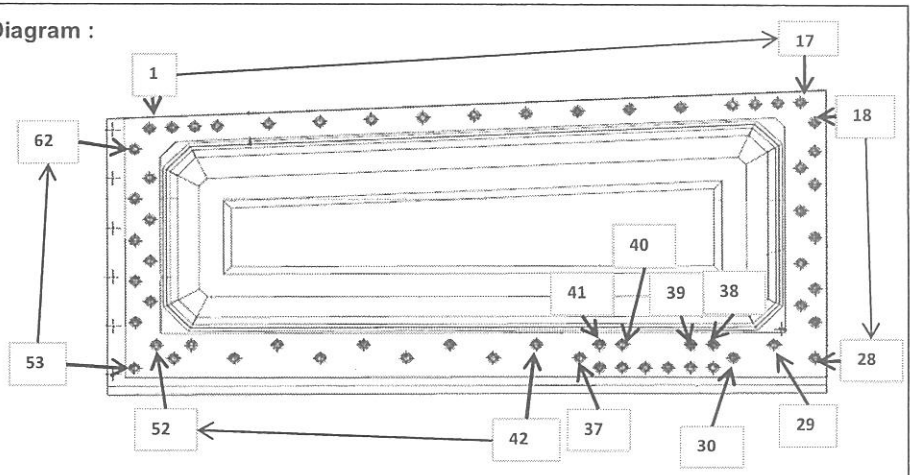
Overall Results : (PASS / FAIL)

CTAM
Aero-Composites

INSPECTION REPORT

Project name	A350 XWB SONACA		
Part name	PANEL 5 LH		
Part number	V5746705100000	**Qty**	1
G.R # / Work Order Router	A350S - 0203 - 0027		
Process area	Dimensional check		
Vendor / Customer name	SONACA		
Vendor / Customer part number	N/A		
Batch / lot / Serial number	0027		
Inspected by	ROZAIMIE	**Issue**	
Drawing number	V57467051	a)Drawing Sheet: 01	
		b)Revision: - A.2	

Diagram :

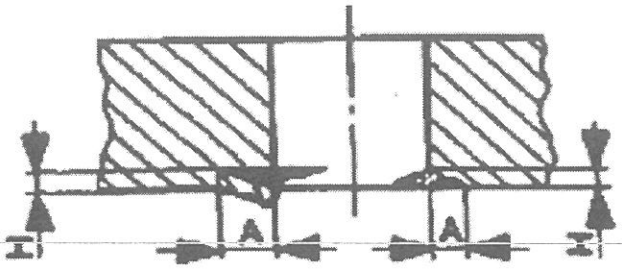


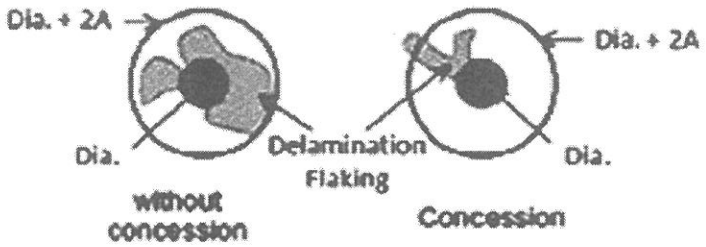
No	Criteria	Area / Location	Standard / Requirement	Point of Inspection											Accept / Reject
				1	2	3	4	5	6	7	8	9	10	11	
1	Thickness	Refer diagram	4.4 ± 0.34 mm	4.16	4.12	4.08	4.08	4.08	4.09	4.07	4.10	4.14	4.11	4.07	(A) / R
			(4.06 ~ 4.74)												
				12	13	14	15	16	17	18	19	20	21	22	
	Thickness	Refer diagram	4.4 ± 0.34 mm	4.22	4.07	4.09	4.08	4.19	4.20	4.20	4.21	4.11	4.14	4.09	(A) / R
			(4.06 ~ 4.74)												
				23	24	25	26	27	28	29	30	31	32	33	
	Thickness	Refer diagram	4.4 ± 0.34 mm	4.13	4.13	4.19	4.16	4.17	4.18	4.21	4.11	4.17	4.16	4.12	(A) / R
			(4.06 ~ 4.74)												
				34	35	36	37	38	39	40	41	42	43	44	
	Thickness	Refer diagram	4.4 ± 0.34 mm	4.14	4.11	4.13	4.11	4.08	4.08	4.07	4.11	4.07	4.10	4.07	(A) / R
			(4.06 ~ 4.74)												
				45	46	47	48	49	50	51	52	53	54	55	
	Thickness	Refer diagram	4.4 ± 0.34 mm	4.07	4.07	4.09	4.09	4.12	4.14	4.15	4.17	4.16	4.15	4.15	(A) / R
			(4.06 ~ 4.74)												
				56	57	58	59	60	61	62					
	Thickness	Refer diagram	4.4 ± 0.34 mm	4.16	4.12	4.16	4.09	4.13	4.12	4.13					(A) / R
			(4.06 ~ 4.74)												

QC Comments : ALL DIMENSIONS IN MILIMETRES
EQUIPMENT FOR INSPECTION : DIGITAL MICROMETER BULLET ID:

Overall Results : PASS (PASS / FAIL)

AC 170 INSP
21/02/14
QC stamp & date





Nominal Hole diameter (mm)	Depth Dimension, H (mm)	Defect Dimension A (mm)	
		Thin part <5mm	Thick part >5mm
<3.2	0.35	2	2
3.6		2	2
4		2	2.5
4.8		2	2.5
5.6		2	2.5
6.4		2.5	2.5
8		3	3
9.5		3	3
11.1		4	4
12.7		4	4
14.3		4	4
15.9		4	4
19		4.75	4.75
22.2		5.5	5.5
>25.4		6.5	6.5

Acceptable limit =

DIA. + 2A = 10.50mm + 2A
10.50mm + 2 (3)
10.50mm + 6mm
16.50mm

A = 16.50mm - 10.50mm
6mm

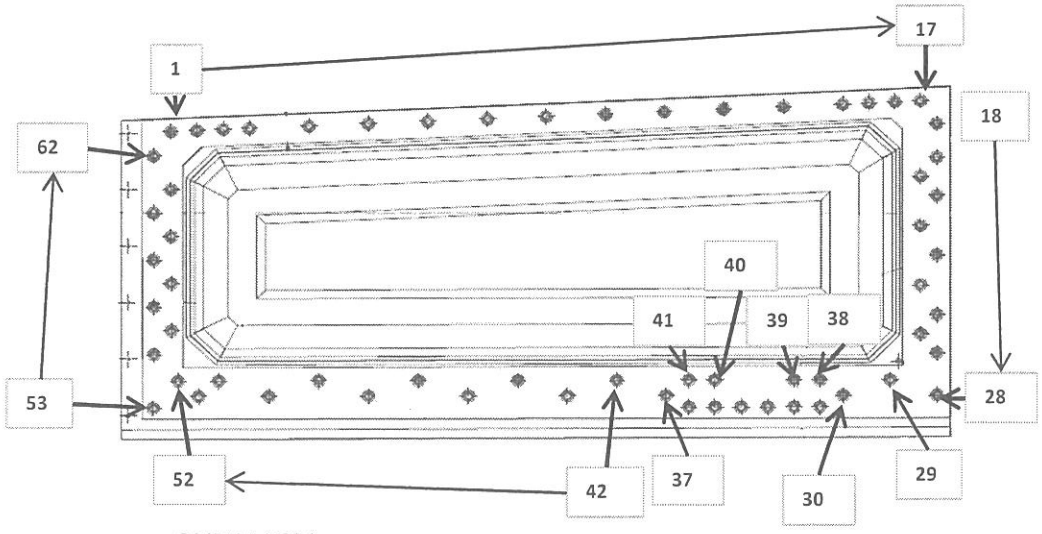
DIA. + 2A = 8.00mm + 2A
8.00mm + 2 (3)
8.00mm + 6mm
14.000mm

A = 14.00mm - 8.00mm
6mm

DIA. + 2A = 3.10mm + 2A
3.10mm + 2 (2)
3.10mm + 4mm
7.10mm

A = 7.10mm - 3.10mm
4mm

SURFACE	HOLE DIA. (NOMINAL)	FABRICS	
		H (mm)	A (mm)
EXIT	10.50mm-10.55mm	0.35	6.00
ENTRANCE		0.35	6.00
EXIT	3.10mm-4.10mm	0.35	4.00
ENTRANCE		0.35	4.00
EXIT	8.00mm-9.00mm	0.35	6.00
ENTRANCE		0.35	6.00



SUMMARY

Hole 1 ~ 62 = 10.50mm ~ 10.55mm
Hole 63 ~ 68 = 3.10mm ~ 4.10mm
Hole 69 = 8.00mm ~ 9.00mm

CTRM

Drill Damage Entrant and Exit Surfaces Measurement

Project : A350 DROOP NOSE
Part Desc : Bottom Panel 5 (LH / ~~RH~~)
Part No : V57467051 (00000 / ~~00100~~)
Serial No : 0027

Hole No	Accept / Reject	Rejected Dimensions in mm (H & W) Entrant Surface	Exit Surface
1	A	✓	✓
2	A	✓	✓
3	A	✓	✓
4	A	✓	✓
5	A	✓	✓
6	A	✓	✓
7	A	✓	✓
8	A	✓	✓
9	A	✓	✓
10	A	✓	✓
11	A	✓	✓
12	A	✓	✓
13	A	✓	✓
14	A	✓	✓
15	A	✓	✓
16	A	✓	✓
17	A	✓	✓
18	A	✓	✓
19	A	✓	✓
20	A	✓	✓
21	A	✓	✓
22	A	✓	✓
23	A	✓	✓
24	A	✓	✓
25	A	✓	✓
26	A	✓	✓
27	A	✓	✓
28	A	✓	✓
29	A	✓	✓
30	A	✓	✓
31	A	✓	✓

Hole No	Accept / Reject	Rejected Dimensions in mm (H & W) Entrant Surface	Exit Surface
32	A	✓	✓
33	A	✓	✓
34	A	✓	✓
35	A	✓	✓
36	A	✓	✓
37	A	✓	✓
38	A	✓	✓
39	A	✓	✓
40	A	✓	✓
41	A	✓	✓
42	A	✓	✓
43	A	✓	✓
44	A	✓	✓
45	A	✓	✓
46	A	✓	✓
47	A	✓	✓
48	A	✓	✓
49	A	✓	✓
50	A	✓	✓
51	A	✓	✓
52	A	✓	✓
53	A	✓	✓
54	A	✓	✓
55	A	✓	✓
56	A	✓	✓
57	A	✓	✓
58	A	✓	✓
59	A	✓	✓
60	A	✓	✓
61	A	✓	✓
62	A	✓	✓

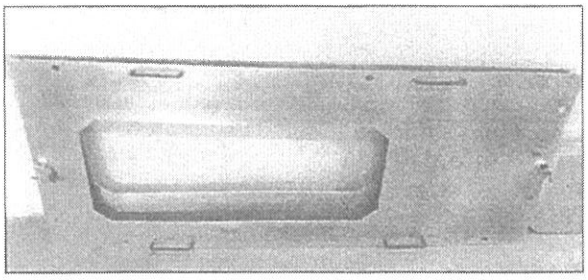
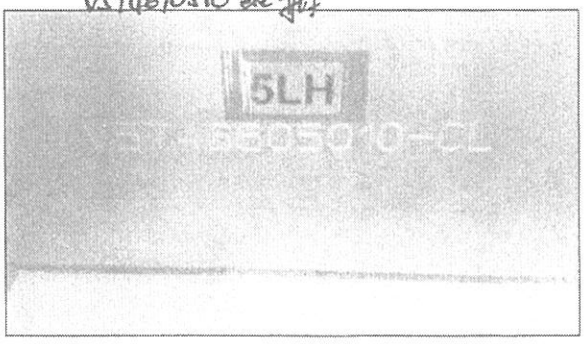
Hole No	Accept / Reject	Rejected Dimensions in mm (H & W) Entrant Surface	Exit Surface
63	A	✓	✓
64	A	✓	✓
65	A	✓	✓
66	A	✓	✓
67	A	✓	✓
68	A	✓	✓
69	A	✓	✓

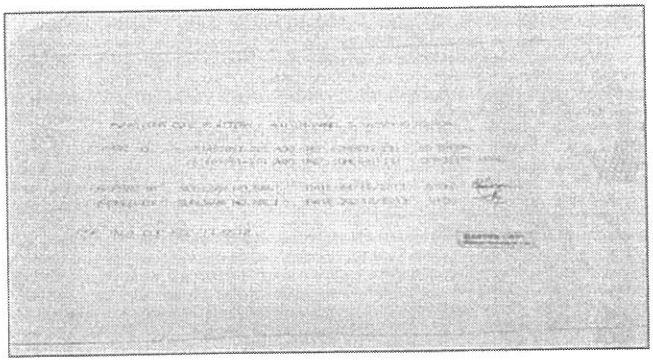
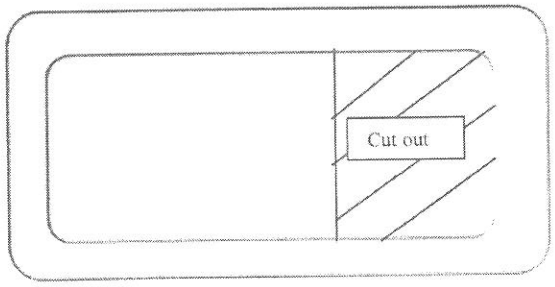
CTRM Aero- Composites	TOOL ORDER	TOOL ORDER NO.
		2014 – TO -00020

Project Name	A350 Droop Nose Bottom Panel	Project Code	CAC/SON/002
Tool Description	A350 Droop Nose panel 5 LH	Tool No.	~~V5746701-220~~ LH V5746701-220
Tool Drawing	TY10031 REV A	TRF No.	7383
Work Description	Modification core location template (CLT) as MSN 21	Quantity	1 pc
Prepared by	Nirman Ismail	Stamp/Sign:	
Checked by	Law Woei Han	Stamp/Sign:	

Revision Details		
Rev	Details	Date*
A	Modified core	21/1/14

MATERIAL	GRR#/BATCH NO. (if available)
NA	

No.	Description	Stamp	Hrs	Date
01	RETRIEVE CORE LOCATION TEMPLATE (CLT) 		0.25	25/1/14
02	TOOL NO: ~~V5746605010~~ CL (PANEL 5LH). V5746705010 		0.25	25/1/14

No.	Description	Stamp	Hrs	Date
03	SET THE CLT WITH LOFT AS REFERENCE CDD NO. CDD-ECC-13-0972. 		0.25	25/1/14
04	SETTING CLT WITH LOFT USE UPPER TOLERANCE LIMIT		0.25	25/1/14
05	MARKING LINE ON TEMPLATE FOR REFERENCE DURING CUT OUT		0.25	25/1/14
06	MACHINE THE CTT 		6.0	27/1/14
07	FINISHING AND FINAL BUY OFF	AC 103 INSP	0.5	28/1/14

Completed Date	Total Man Hours	Total Machine Hours	History Card Updated
28/1/14	7.75 HRS	-	Stamp and Date: 16/4/14

Signature, stamp and date			
Tool Inspection and sign-off		For acknowledgement (if required)	
Tooling Eng.	Tooling Quality	Manufacturing Eng.	Production Rep.
AC 51 TOOL 29/1/14	AC 103 INSP 28/1/14	-	-

CTRM

Aero-Composites

TOOLING INSPECTION CHECKLIST

(A) IDENTIFICATION			
Tool Description	B350 BOOM NOSE CFT PANEL S LH/RH	Drawing Number	TY 10031
Tool Number	TY 10031	Reference Doc.	TRF: 7384

(B) ACTIVITY *(Please tick ✓)*					
✓	* Receive from	VENTACE		Return to	
	** Quarantine/Scrap at	☐ In _____ ☐ Out		Transfer	From _____ To _____

(C) PURPOSE / REASON *(Attached evidence when required)*

DUE TO MSN 021 MODIFICATION FOR H/COMB MANUFACTURING.

(D) CHECK ITEM	YES	NO	STAMP/DATE
1. QC issue Hold Tag before tooling inspection.	☐	☒	AC 103 INSP 24/2/14
2. Documentation Inspection • Delivery Order / Invoice • Supporting Documents (Where Applicable) ☐ Certificate of Conformance ☐ All Relevant Drawings ☐ Last Article Inspection Record ☐ Inspection Report ☐ Others _____ Comment (If any):	☐ ☐	☒ ☒	AC 103 INSP 24/2/14
3. Physical Inspection - Packaging Condition Comment (If Any):	☒	☐	AC 103 INSP 24/2/14
4. Tooling Inspection (Refer Progressive Inspection Report -- Reg. No. 088) • Inspection Points (Basic) ☑ Tool Identification ☐ Surface Conditions ☑ Dimension Check ☐ Vacuum Integrity ☐ Digital Inspection (CMM / FARO) (If Required) ☐ Roughness Test (If Required) ☐ Others _____ Comment (If Any):	☒	☐	AC 103 INSP 24/2/14
5. Tool Discrepancy ☐ Tooling Defect Report (Reg. No. 002) (TDR # : _____) ☐ Good Discrepancy Report (Reg. No. 004) (GDR # : _____)	☐ ☐	☒ ☒	AC 103 INSP 24/2/14.
6. Tool Acceptance • Buy-Off: Tooling, Program, Customer (If Required) • Register Tool Entry in Tooling Register • Issue Serviceable Tag at tool and release to Production	☐ ☑ ☑	☒ ☐ ☐	AC 42 TOOL QA 24/2/14

** Restricted to tool accessories and MTG only.* *** Cancel which is not applicable*

CTRM
AERO-COMPOSITES

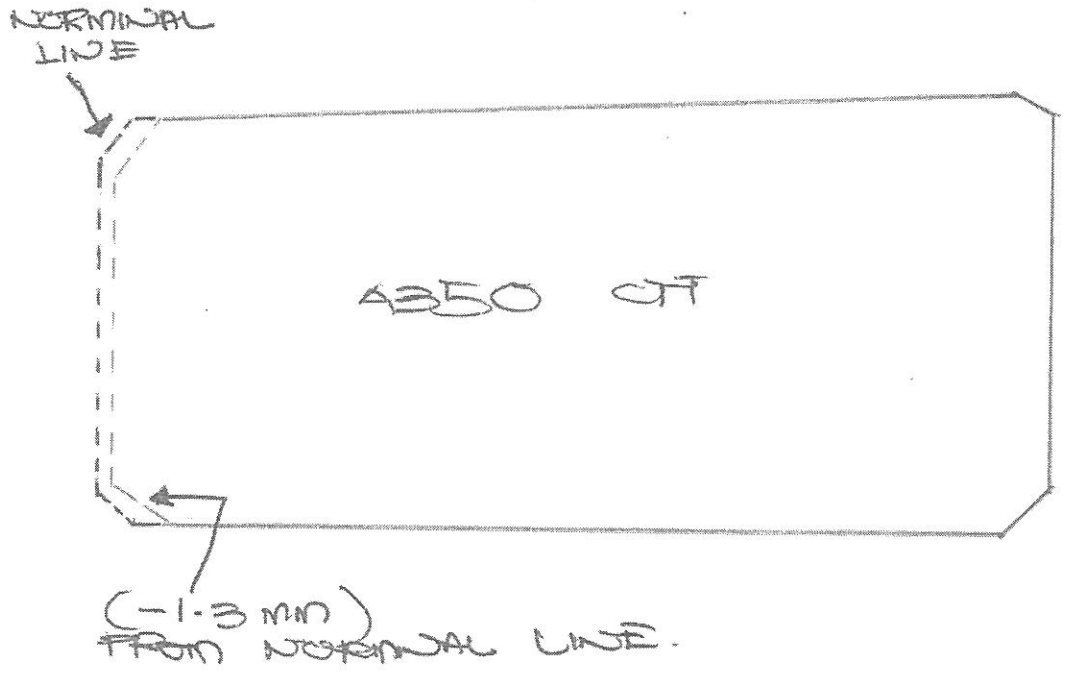
PROGRESSIVE INSPECTION REPORT

TOOL NO. : TY 10031 DRAWING NO. : TY 10031

TOOL NAME : A350 DROOP NOSE CTT PANEL LH/RH PART / ASSY.DESCRIPTION : CTT.

SKETCH

VERIFY CTT A350 DROOP NOSE.



CHECK WITH LOFT CBD-ECC-13-0972 READING IN TOLERANCE.

AC 3.03 INSP
24/2/14

Reg No ; 088B-F

CTRM
Aero-Composites

TOOLING REQUEST FORM

PROJECT CODE ® : CAC / SON 1002.
ACCOUT CODE ® : 82-01000 - V2SON002 - V003

No : 7384

Type of work ®	Qty ®	DETAIL OF TASK : (Describe detail of requisition or discrepancy) ®
New Fabrication		- Reason : MIN 021 mod.
Modification, Enhancement	1	- Impact : - Enlargement of h. core size for Panel 5.
Type of Product		- Part number change from V57466052 to V57467051
Tool Master		
Mould Tool		- Request to fabricate new h. core trimming template for h. core manufacturing.
Trim & Drill /Hold. Fixture		
Gasket Sealant Tool		- Refer attachment for details.
Tool Rework		
Intensifier		
Core Locator		
Accessory Tool (Pin, Drill Block, Lifting and Others)		
Jig, Templates, Specify		
Dwg./Model Register:		Acknowledge by Program Leader ® — Signature/Stamp — (Budgeted)/Non Budgeted

Priority: ® Urgent / ~~High / Medium*~~ Date Required : ®

	Request by ®	Review by ®	Checked by ®	Approved by ®
Signature & Stamp			CTRM AERO COMPOSITES MAZATUDDIN ASWANDY 20563	
Name	Hazrul Aziz.	NIRMAN ISMAIL	MAZATUDDIN ASWANDY	MOHD FIRDAUS.
Date	30.12.2013	30.12.13	31/12/13	2/1/14
	Ext : 2012 Dept/Sec : VS2 / MC.	Tooling PIC	Head of Section	Head of Department / * Division

Note : All TRF must be checked by Head of Section and approved by Head of Department / Division.
* If job requested relates to NEW company infrastructure (i.e Fixed assed) TRF also must be approved by respectire Head of Division.
® Must be filled by requestor correctly.

FOR TOOLING SECTION USE ONLY

TRF received date: 2/1/2014

A. REFERENCE DOCUMENT (Example : PR No. 12345, if required)

FABRICATION: INHOUSE / SUBCONTRACT

B. HOURS

MAN-HOURS	DIRECT	INDIRECT	MACHINE	HOURS	TYPE
Estimation Lead Time		Start Date		Finish Date	

C. MATERIAL COST

MATERIAL	DIRECT	INDIRECT	JOB RECEIVED BY	
			DATE	

Report Prepared by:	Name		Sign/Stamp		Date	

Copy#1 (White) Original copy Copy#2 (Green) Customer/Requestor copy Copy#3 (Pink) Finance Department Copy

CTRM
AERO-COMPOSITES

TOOLING & CAD SECTION

TASK DESCRIPTION : TR1

PROJECT CODE :

COMPLETED BY : FORD ZUL

TRF/~~TBR/TOOL ORDER~~ NO. :

WORK AREA : TOOLING

DATE : 24/2/14.

WORK CRITERIA

NO.	DATE	DESCRIPTION	MANHOURS (minute/hour)	MACHINE HOURS	MANPOWER	TOTAL MANHOURS
		* RECEIVE TOOL	0.5		1P	0.5
		* DOC. INSP	0.25			0.25
		* TOOL INSP.	0.75			0.75
		* ID INSP.	0.25			0.25
		* PAPERWORK.	0.25			0.25
		* SENT TO CUSTOMER.	0.25			0.25
				TOTAL	1P	2.25

Note : Only TCC use ManHours in Minutes. For others Form, please use in Hours unit.

MATERIAL

NO.	DATE	DESCRIPTION	QTY	PRICE Per pcs (RM)	MATERIAL COST
				TOTAL	

CTRM aero composites	Document Title: IPT TEST SHEET	Document Title: PROJECT: A350 BOTTOM PANEL	Registration Number: CAC-TS-0154
	CTRM AERO COMPOSITES SDN. BHD.		Page 1 OF 1 / Issue 3

SAMPLE ID	A350S-A4140203-01-0102-0200		
PART DESCRIPTION:	PANEL 5 BOTTOM PANEL	PROCESS REQUIREMENT REFERENCE:	CER
TS NO :	4510456	TRACKING ID:	17 FEB 2014 - TL - 1183

A: Glass Transition Temperature (Tg via DMA) per AiTM1.0003

Tg (°C)		Min Average Values (°C)	Result	Test Lab	Remark
ID	Onset				
1	216	Onset > 190	PASS	☑ CAC ☐ OTHERS _____	Rufizam 6.02.14
2	215				
3	215				
AVG	215				

B: Cured Coupon Thickness as per Inspection by Micrometer

ID	Thickness (mm)	Range (mm)	Result	Test Lab	Remark
1	2.16	1.90 - 2.58	PASS	☑ CAC ☐ OTHERS _____	Nurul 7.02.14
2	2.16				
3	2.13				
4	2.14				
5	2.12				

C: Interlaminar Shear Strength at RT per EN2563

ID	Shear Stress (MPa)	Min Individual (MPa)	Result	Test Lab	Remark
1	70.80	60	PASS	☑ CAC ☐ OTHERS _____	Asbullah 7.02.14
2	77.76				
3	80.95				
4	80.05				
5	74.53				
AVG	76.82				

D: Carbon Fiber Volume per Manual Calculation

ID	Fiber Volume (%)	Individual Range (%)	Result	Test Lab	Remark
1	58.26	52-60	PASS	☑ CAC ☐ OTHERS _____	Nurul 7.02.14
2	58.26				
3	59.08				
4	58.80				
5	59.36				
AVG	58.75				

SAMPLE ID	A350S-A4140203-01-0104-0250

E: Honeycomb Peel per EN2243-3

ID	Peel Strength (Nmm/mm)	Min Individual (Nmm/mm)	Result	Test Lab	Remark
1	61.39	40 and Cohesive Failure	PASS	☑ CAC ☐ OTHERS _____	Khambali 7.02.14
2	56.46				
3	73.05				
AVG	63.63				

COMMENT: ALL TESTS PASSED

VERIFIED BY
AC 22 TEST
d d m m y y
1 7 0 2 1 4
Reg No. : 166F-F

FIRST ARTICLE INSPECTION

C RM AERO-COMPOSITES SDN. B D.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

Required drawings/ documents	Rev/issue
V57467051 – Sheet 1/2/3/4/5/6/7	~~A00~~ -A.2
V57467056 – Sheet 1/2	~~A00~~ – A.2
A350 Bottom Panels CMR	1
TDS V57466015	B

AC 27 ME

eie 24453 7/11/14

COPY NO. 31

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Revision details

Rev	Details	Date*
A	First issue. Part V5746705100000 replace V5746605200000.	24 December 2013

THIS IS A CONTROLLED COPY WHEN THIS STAMP IS IN RED INK

D.D.C. MFG DEPT

SERVICEABLE

Prepared by	Approved by (ENG)	Approved by (QA)
AC 27 ME	AC 19 ME	AC 44 QA
Signature or/& stamp	Signature or/& stamp	Signature or/& stamp
Name: Nahdatul Izah	Name: Hazreek Aziz	Name: Aminah Kamalludin

Released by	SITI ADLINA	Date :	27-DEC-2013

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* Format for date must be **DD/MM/YY**

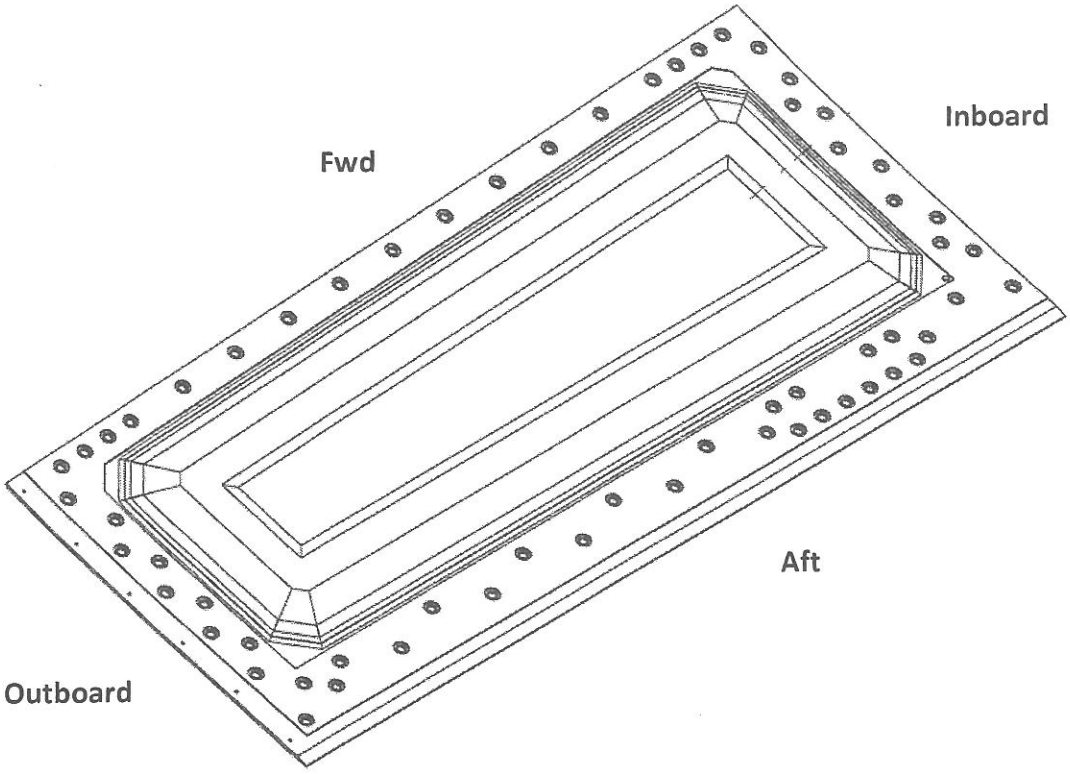
WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

Panel 5 LH

Isometric (facing bagging surface)



WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

Oper	Work ctr	Operation description	Tool no.
		Note : • Manufacture panel in accordance to AIPS03-02-018 and AIPS03-02-019. • General manufacturing tolerances in accordance with ABS5797 unless otherwise stated. • Operations must used approved gloves and tools to perform a job. • Approved operators are to ensure that test pieces are correctly identified and sent to lab for testing. • For specific lay-up information refer to drawing sheets. • Only approved material to be used in all processes where required. • All components are subject to in process inspection. • Ensure to record all required detail information & is stamped after complete works.	

For 10 panels manufacturing in a batch.

Nesting files	Part	Plies quantity	Ply Identification	Ply Map
SLBP5WE 0	Carbon Woven	46	V57467051L_Pxx_WxA	DT10015
SNLXXVA 0	Glass FRP	6	V57467051L_Pxx_V-B	
SNLXXMA 0	Bronze Mesh	1	V57467051L_P2_M-A	
SNLXXNA 0	Surfacing film	2	V57467051L_Pxx_F-B	
SNLXXL1B 0	Adhesive film EA9695.05K	2	V57467051L_PA1x_L-A	
SNLXXL2B 0	Adhesive film FM300M03	2	V57467051L_PA2x_L-B	

AC 19 ME

Table 1a: List of Plies

Nesting definition:

- SRBP5WE consist of 1 set carbon woven for Panel 5 LH.

Notes:

• SNRXXVA consist of 5 sets Glass FRP for LH panels. • SNRXXMA consist of 5 sets Bronze Mesh for LH panels. • SNRXXNA consist of 5 sets SM905 Surfacing Film for LH panels. • SNRXXL1B consist of 5 sets EA9695.05K Adhesive Film for LH panels. • SNRXXL2B consist of 5 sets FM300M03 Adhesive Film for LH panels.	Select and kit plies based on the ply identification marking.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

010	DN-KIT	**Kitting** **Material Preparation** **Operation** 1. Withdraw material as per Work Order Picklist. 2. Record all required info: **a. GR number.** **b. Batch number.** **c. Shelf life** **d. Roll number** **e. Outlife** In Work Order Picklist & Picklist Attachment. 3. Thaw in room temperature until no condensation of moisture on plastic bag. 4. Cut-off required materials. 5. Return remainder of material to freezer with sealed bag and desiccant. **Inspection** 1. Ensure all materials are within its shelf life and out life. 2. Ensure all details are recorded. **Material Cutting** **Operation** **1. Refer to Table 1a (page 3) before performing the cutting process.** 2. Locate material into material dispenser. 3. Feed material onto the gerber machine bed (S91 0r DCS3500). 4. **Warp surface (0° orientation) shall face up** (if available). 5. Ensure and record nesting file name on the WOR. 6. Start cutting material as per nesting file names. 7. Collate all plies into component kit sets indent. 8. Indent kit set with correct component serial number. 9. Seal kit materials with moisture proof bag together with dried desiccant inside **Inspection** 1. Ensure correct nesting file names used and revisions recorded in WOR. 2. Ensure correct quantity, orientation and shape.	

* Format for date must be **DD/MM/YY**

FIRST ARTICLE INSPECTION

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

020	DN-KIT	**Kitting** **Operation** 1. Stack ply profiles in accordance with lay-up sequence. 2. Group ply profiles into plastic bag and pack into component kit set. 3. Label the kit with WI number, part number and CSN number. Insert dessicant together with kit and seal plastic bag. 4. Send kit back to freezer if not used as per CAP03-002. 5. Attach ply checklist *reg.no:246b-f* and material identification tag (MIT) together with WOR. **Inspection** 1. Packaging is labeled for identification. 2. Ensure material ERP number is similar with Picklist Attachment (PA). 3. Verify the ply checklist for any discrepancy. 4. All information on PA and WOP has been filled accordingly	
030	DN-LAY	**Mould Receipt** **Operation** **As information: Mould preparation done as per CAP7-015 and A350 Bottom Panel CMR documents.** 1. Receive correct mould tool. 2. Ensure mould is serviceable & released with preparation sticker. 3. Stick mould preparation sticker on WOR before layup begin. **Inspection** 1. Visually ensure the mould component is free from surface defect damage. 2. Ensure mould tool has been prepared as above.	**Tool number:** **(SONACA Number)** 62 - 000247 - 00 - 01 - D 293 - V574 67051 000 [LH]
040	DN-LAY	**Kit Receiving** **Operation** 1. Receive correct kit for lay-up **(refer Table 1b (Page 6) for plies identification).** 2. Stack plies base on lay-up sequence. **Inspection** 1. Ensure correct plies quantity, orientation and shape. 2. Ensure material quality is acceptable.	**Kit number:** V57467051000 **Ply map number:** DT10015

* Format for date must be **DD/MM/YY**

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Final bagging & compaction 5 (Minimum 10 minutes)			
Ply 18	Tedlar	Not applicable	Not applicable
Ply 17	GFRP	Not applicable	Not applicable
Ply 16	Carbon Woven	0	warp up
Ply 15	Carbon Woven	45	warp up
Ply 14	Carbon Woven	135	warp up
Ply 13	Carbon Woven	0	warp up
Ply 12	Carbon Woven	45	warp up
Compaction 4 (Minimum 10 minutes)			
Ply 11	Carbon Woven	135	warp up
Ply 10	Carbon Woven	90	warp up
Ply 9	Carbon Woven	0	warp up
Ply 8	Carbon Woven	135	warp up
Ply 7	Carbon Woven	45	warp up
Compaction 3 (Minimum 10 minutes)			
Pre-enveloped honeycomb core preparation			
Compaction 2 (Minimum 10 minutes)			
Ply 6	Carbon Woven	90	warp up
Ply 5	Carbon Woven	135	warp up
Ply 4	Carbon Woven	45	warp up
Compaction 1 (Minimum 10 minutes)			
Ply 3	Carbon Woven	0	warp up
Ply 2	Bronze Mesh	Not applicable	Not applicable
Ply 1	Surfacing Film	Not applicable	Not applicable
TOOL SURFACE			

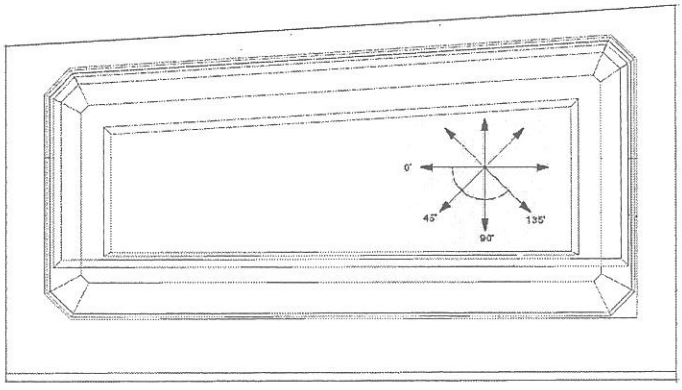
Table 1b: Plies Identification

050	DN-LAY	<u>Lay-up</u> <u>Honeycomb Core Drying</u> **Operation** 1. Withdraw honeycomb core as per Work Order Picklist from storage. 2. Dry the honeycombcore in oven for a minimum of 2 hours at 120 ± 5°c. It is permissible to maintain honeycomb core in oven temperature at 60 ± 5°c after that up to 12 hours in accordance with A350 Bottom Panel CMR. 3. Record the honeycomb core information; Part number and GR number for traceability in Work Order Picklist.	

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

		Inspection 1. Ensure drying duration as per above requirement. 2. Ensure core tag clear and complete. 3. Ensure all details are recorded.	
060	DN-LAY	**Note for Operator & Inspector** **Operator & inspector shall stamp after notified. Inform others if the personnel changing.** **Carbon Woven, Bronze Mesh & Glass Woven Plies Positioning.** 1. Refer to scribe line/ edge member on mould tool as a guide line for lay up. 2. Lay-up process shall follow lay-up table sequence as defined in **Table 1b (page 6).** 3. Ensure foil and backers of each plies are removed. 4. Plies orientation base to ply datum compass as in **Figure 1 (Page 7)** and refer to ply datum compass as a guidance to start lay-up process.  **Figure 1: Datum compass** 5. Ply overlaps are not permitted on interfay sealant surfaces, butt joints are acceptable within gap limits of 0.0 to 1.5mm and once clear of the interfay sealant surface the material must overlap accordingly. 6. Ply orientations on drawing all refer to the warp surface of the material. Warp surface is covered by white backer. "warp up" means the warp surface of material faces upward, and "warp down" means the warp surface faces the tool. 7. Inspect visual, dimensional and lay-up quality for each plies. 8. If any defect is observed, it shall not exceed the acceptable limits indicated in **Table 3**. 9. The separating film of the prepreg shall be removed taking care to neither alter the alignment nor cause damage. 10. Place the prepreg plies taking special care to avoid entrapment of air, dust, foreign materials or formation of wrinkles and distortion of the fibers. 11. Indicated **ply drop off is subject to a tolerance of ± 2.0 mm** as per ABS5797.	

Material Type	Orientation	Requirements
Prepreg fabric	In the warp direction	±5°

Table 2: Prepreg orientation

No.	Typical defects	Acceptable values without rework	Acceptable values with rework	Rework methods
1	Cuts in plies 1)	None	A cut with a length less than 50 mm per linear meter of prepreg	Overlap the cut with a piece of prepreg of the same material and Same orientation. Overlap from 12 to 25 mm
2	Fold or wrinkles on plies	None	A fold of 300 mm maximum, provided that the fibres are not damaged	Remove with the help of a hot air blower at 50°C maximum
			If the fibres are damaged, a fold of 50 mm maximum length for each meter of prepreg	Smooth with the help of a hot air blower , and treat as a cut (Step 1 of this table)
	Fabric deformation (**Figure 2 page 8**)	If d > 6 mm L/d must be > 10 If d < 6 mm L/d may have any value	None	Not applicable
	Defects indicated in the Technical Specification (TS)	None	Unlimited	Remove the affected area

Notes:
1) The stagger between consecutive cuts shall be at least 25 mm.

Table 3: General acceptance criteria for prepreg plies

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

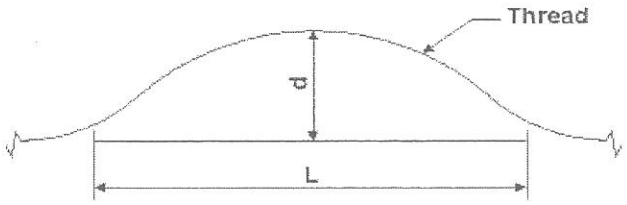


Figure 2 : Fabric Deformation

Splice allowance

Unless otherwise specified in drawings, dimensions, tolerances and types of splice allowed in the prepreg plies are listed in **Table 4.**

Prepreg 1)	Overlap splice		Butt splice	
	Overlap (mm)	Stagger 2) (mm)	Maximum gap (mm)	Stagger 2) (mm)
Fabric	12 - 25	≥25	Not permitted	

Notes:

1) In special cases, deviations can be allowed, provided it is previously agreed between Airbus Stress and Manufacturing departments and is indicated in the Composite Engineering Requirement.

2) Stagger is defined in this specification, as the distance between two consecutive splices. If there are at least four intermediate plies between two splices, it is not necessary to apply the stagger required **(See Figure 3 and Figure 4 page 10).** For butt splices, this last consideration applies only to plies in the same direction.

Table 4: Splice allowance

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

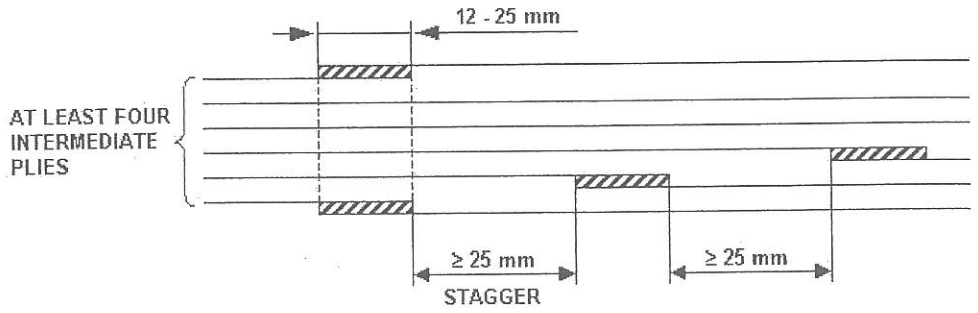


Figure 3 : Overlap Splice

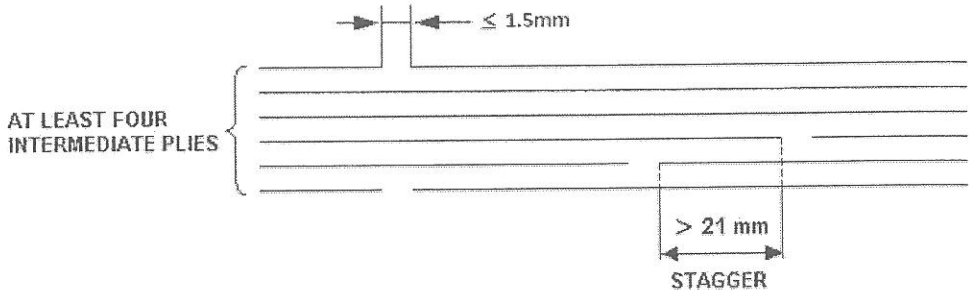


Figure 4: Butt splice.

Adhesive film and Peel Ply positioning

Material	Requirements	
Film adhesive	Maximum gap	1,5 mm
	Maximum overlap	10 mm
Peel ply	---	Butt splice 1)

Notes:

1) Peel-ply splices must be avoided whenever when possible.
If peel-ply overlap is needed, lay material on with an overlap of 2 mm to 5 mm.
If cut portions of peel-ply are applied next to each other, be careful that there are no major changes to the contours of the cut portions of peel-ply. The required templates must be dry, abrasion proof and free from dust and release agent.
Gaps between peel-ply splice should be avoided.

Table 5: Adhesive and peel-ply splicing

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

		Bagging & compaction 14. Refer **Figure 5 (page 11)** for bagging sequence detail. 15. Compaction duration approximately 5-6 minutes unless otherwise specified. 16. Ensure proper sealing and bagging during compaction.

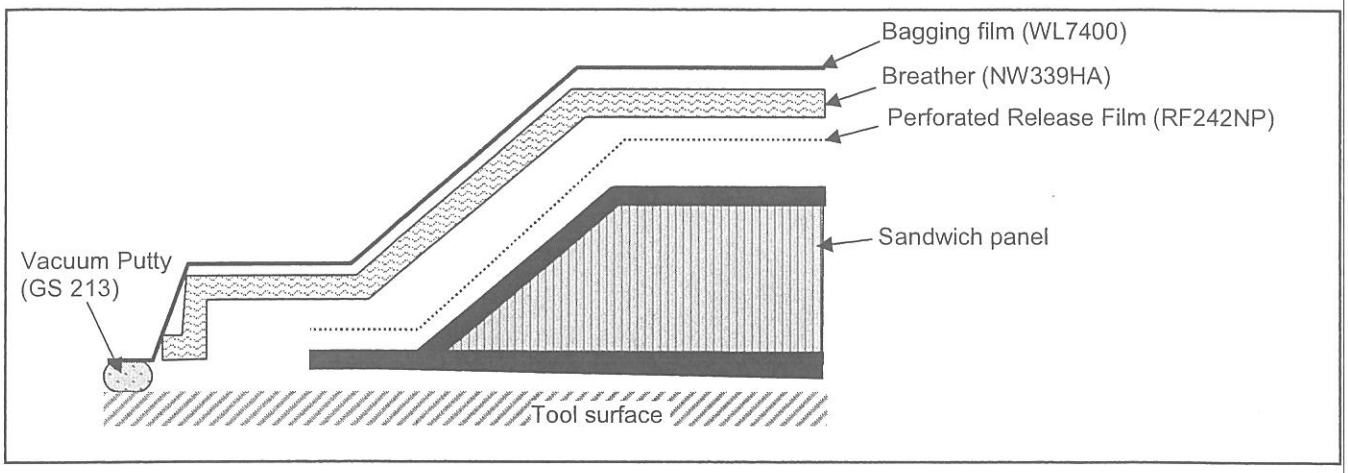


Figure 5: Lay-up Bagging Technique

070	DN-LAY	<u>**Lay-up Plies Stack #1 (SM905 + Bronze Mesh + Carbon Woven)**</u> **Note:** **In summary, the concept is to bonding Ply 3 (Carbon Woven) with Ply 2 (Bronze Mesh) first; and then followed by Ply 1 (Surfacing Film).** **Tool number:** **(SONACA Number)** 62 - 000247 - 00 - 01 - D 293 - V574 66052 000 [LH] **Operation** 1. Take Carbon Woven (Ply 3). 2. Remove the white backers (warp backer). 3. Take Bronze Mesh (Ply 2). 4. Remove the yellow & red stripe backer. 5. Match Ply 2 to Ply 3 (Bronze Mesh to Carbon Woven) 6. Remove brown paper baker from Bronze Mesh. 7. Take Ply 1 (Surfacing Film SM905). 8. Remove backer (non-sticky). 9. Flip SM905 180°. 10. M Remove backer from SM905. 11. Match SM905 to Bronze Mesh. 12. Flip stack plies 180°; [Surfacing film surface was facing up, is now facing down towards mould tool.] 13. Locate completed ply stack onto the mould and remove backer from carbon woven.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

		Inspection 1. Ensure backers completely removed.
080	DN-LAY	**Compaction** **Operation** Compact for minimum 10 minutes. **Inspection** Check and record vacuum reading. Ensure sufficient 10 minutes of compaction.
090	DN-LAY	**Lay-up** **Operation** 1. Lay-up **Inspection** 1. Ensure backers completely removed. 2. Ensure the orientation is correct.
0100	DN-LAY	**Lay-up** **Operation** 1. Lay-up **Inspection** 1. Ensure backers completely removed. 2. Ensure the orientation is correct.
0110	DN-LAY	**Lay-up** **Operation** 1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 4	Carbon Woven	45	warp up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 5	Carbon Woven	135	warp up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 6	Carbon Woven	90	warp up

* Format for date must be **DD/MM/YY**

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

		Inspection 1. Ensure backers completely removed. 2. Ensure the orientation is correct.	
0120	DN-LAY	**Compaction** **Operation** Compact for minimum 10 minutes. **Inspection** Check and record vacuum reading. Ensure sufficient 10 minutes of compaction.	
0130	DN-LAY	**Enveloping Honeycomb Core with EA9695.05K Adhesive Film** **Note: Refer to Figure 7 (Page 14). Honeycomb core shall be prepared in accordance with the Figure 7 condition. Detail instruction describe as below. Ensure no gap of adhesives and any exposed honeycomb core surface. Please take any precaution step to avoid any contamination of adhesive films and honeycomb core especially during debulking and enveloping processes.** **Operation** 1. Withdraw honeycomb core from oven. 2. Record **time out** from oven in Work Order Routing. 3. Take Adhesive Film Hysol EA9695.05K (Bottom Layer). 4. Remove paper backer. 5. Locate honeycomb core onto exposed Hysol EA9695.05K. 6. Flip up all Hysol EA9695.05K edges towards honeycomb core ramp. 7. Take Adhesive Film EA9695.05K (Top Layer). 8. Remove paper baker. 9. Locate exposed Hysol EA9695.05K onto honeycomb core. 10. Flip down all edges towards honeycomb core ramp. Ensure the joining between Bottom and Top Layers are overlapping minimum 15mm width. 11. Remove EA9695.05K top baker. **Inspection** 1. Ensure backers completely removed. 2. No gaps permitted in adhesive film joints. 3. Ensure core must be laid up within 1 hour after out from oven to prevent moisture absorption.	

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0140	DN-LAY	<u>Enveloping Honeycomb Core with FM300M03 Adhesive Film</u> **Note: Refer to Figure 7 (Page 14). Honeycomb core shall be prepared in accordance with the Figure 7 condition. Detail instruction describe as below. Ensure no gap of adhesives and any exposed honeycomb core surface. Please take any precaution step to avoid any contamination of adhesive films and honeycomb core especially during debulking and enveloping processes.** **Operation** 1. Take Adhesive Film FM300M03 (Bottom Layer). 2. Remove the red baker. 3. Take the pre-enveloped honeycomb core. 4. Remove EA9695.05K bottom baker (paper). 5. Locate the pre-enveloped honeycomb core onto exposed FM300M03. 6. Flip up all FM300M03 edges towards honeycomb core ramp. 7. Take the Adhesive Film FM300M03 (Top Layer). 8. Remove the blue backer. 9. Locate exposed FM300M03 onto pre-enveloped honeycomb core. 10. Flip down all edges towards pre-enveloped honeycomb core ramp. Ensure the joining between Bottom and Top Layers are overlapping minimum 15mm width. 11. Remove the FM300M03 top baker. 12. Remove the FM300M03 bottom baker. **Inspection** 1. Ensure backers completely removed. 2. No gaps permitted in adhesive film joints. 3. Ensure core must be laid up within 1 hour after out from oven to prevent moisture absorption.	

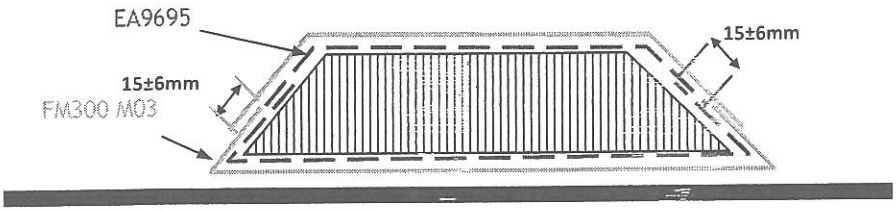


Figure 7: Enveloping Honeycomb core with Adhesive Films

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0150	DN-LAY	<u>Locating Honeycomb Core on mould (laid up plies).</u> **Operation** 1. Position honeycomb core locater. 2. Locate honeycomb core into the locater. Align honeycomb core as instruction in **Figure 8 (Page 15)** below. 3. Remove honeycomb core locater. **Inspection** 1. Ensure honeycomb core is positioned properly.	

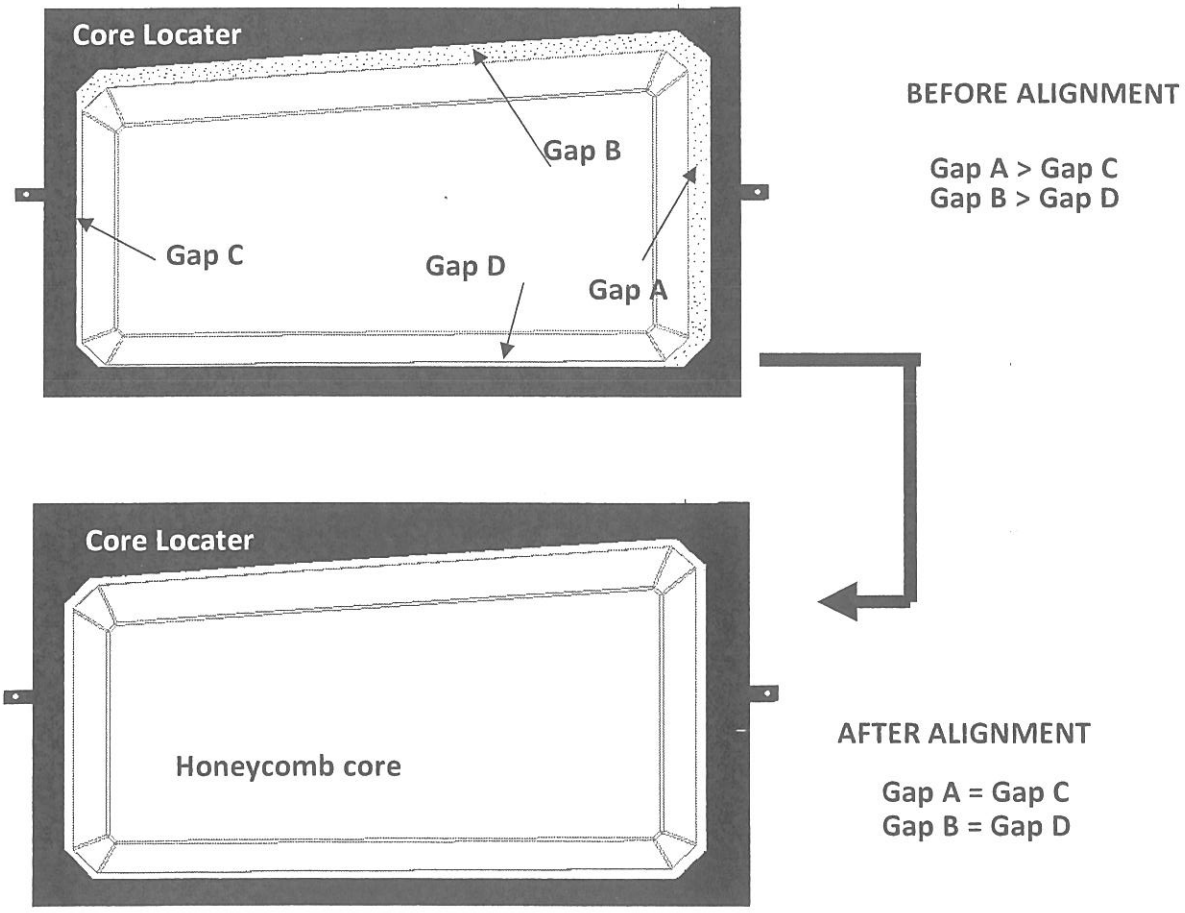


Figure 8: Methodology for honeycomb core positioning.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0160	DN-LAY	**Compaction** **Operation** Compact for minimum 10 minutes. **Inspection** Check and record vacuum reading. Ensure sufficient 10 minutes of compaction.	

0170 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 7	Carbon Woven	45	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0180 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 8	Carbon Woven	135	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0190 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 9	Carbon Woven	0	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0200 | **DN-LAY**

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 10	Carbon Woven	90	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0210 | **DN-LAY**

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 11	Carbon Woven	135	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0220 | **DN-LAY**

Compaction

Operation
Compact for minimum 10 minutes.

Inspection
Check and record vacuum reading. Ensure sufficient 10 minutes of compaction.

0230 | **DN-LAY**

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 12	Carbon Woven	45	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0240 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 13	Carbon Woven	0	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0250 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 14	Carbon Woven	135	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0260 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 15	Carbon Woven	45	warp up

Inspection
1. Ensure backers completely removed.
2. Ensure the orientation is correct.

0270 DN-LAY

Lay-up

Operation
1. Lay-up

Ply Number From Table In Drawing	Material	Orientation (°)	Warp up/down
Ply 16	Carbon Woven	0	warp up

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

		Inspection 1. Ensure backers completely removed. 2. Ensure the orientation is correct.	
0280	DN-LAY	**Compaction** **Operation** Compact for minimum 10 minutes. **Inspection** Check and record vacuum reading. Ensure sufficient 10 minutes of compaction.	
0290	DN-LAY	**Lay-up Ply GFRP.** **Operation** 1. Lay-up **Ply GFRP on monolithic area with an additional excess of 6.1mm with tolerance +6mm/ -0mm on honeycomb core ramp.** **Inspection** 1. Ensure backers completely removed. 2. Ensure excess GFRP material is sufficient.	
0300	DN-LAY	**Lay-up Tedlar.** **Operation** 1. Lay-up **Tedlar on honeycomb core area with an additional excess 6mm with tolerance ±3mm from honeycomb core footprint.** **Inspection** 1. Ensure backers completely removed. 2. Ensure excess Tedlar material is sufficient.	
0310	DN-LAY	**Thermocouple Installation** **Operation** 1. Install thermocouples on the mould tool as in **Figure 10 (Page 21)** **Inspection** 1. Ensure thermocouple location is correct. 2. Ensure all thermocouples in good condition, calibrated and serviceable.	
0320	DN-LAY	**Final Bagging** **Operation** 1. Carry out final bagging on the mould tool as in **Figure 9 (Page 20).** 2. Connect the vacuum bag to the vacuum network and wait until a manometric pressure inside the vacuum ≤-33 kPa (9.75 inch Hg) is reached and steady inside the vacuum bag.	

WI	WORK INSTRUCTION	
Contract/Project CAC/SON/002	Work Instruction A350SON- 0203- 01	Revision A
Part No. V5746705100000	Description A350XWB: D. NOSE PANEL 5 - LH	Part Issue -A.2

		3. Isolate the vacuum supply from the bag. 4. Check the vacuum loss. The loss rate shall not exceed 2.0 inch Hg in 5 minutes. The order is tighter than AIPS requirement to prevent a risk of bagging failure. (Note: AIPS03-02-018 requirement stated as shall not exceed 2.6 kPa (0.77 inch Hg) in 2 minutes). 5. Record leak value and measuring time on Work Order Routing. 6. After 10 minutes, fully release the vacuum by plugging in the release valve. Leave the valve attached at least for 5 minutes. **Inspection** 1. Ensure proper bagging (all ancilary materials laid down, proper sealed and vacuum pressure checked). 2. Inspector to re-check & ensure the outlife is sufficient for curing. 3. Ensure bagging is smooth on the component surface, in a way that there will be no mark leave on the component after demould process. 4. Ensure the vacuum pressure is being released in accordance with the instruction above.	
0330	DN-LAY	**Test panel record** **Operation** 1. Record Test Panel's Work Order Routing number in Picklist Attachment for easy traceability. **Note : 1 piece Solid Laminate Test Panel** **+** **3 pieces Honeycomb Core Drumpeel Test Panel** **Inspection** 1. Ensure all details are recorded.	

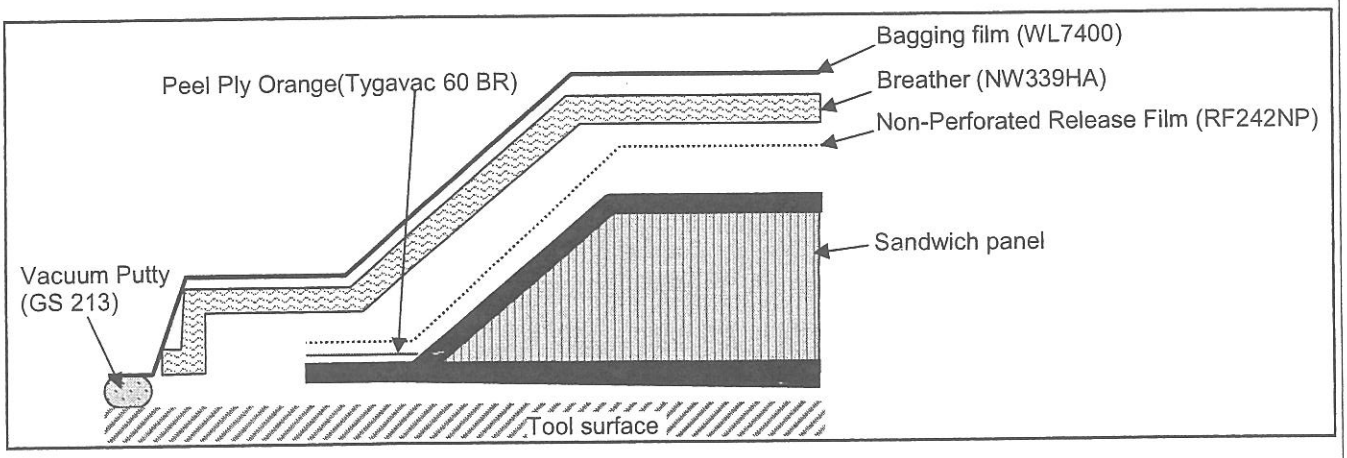


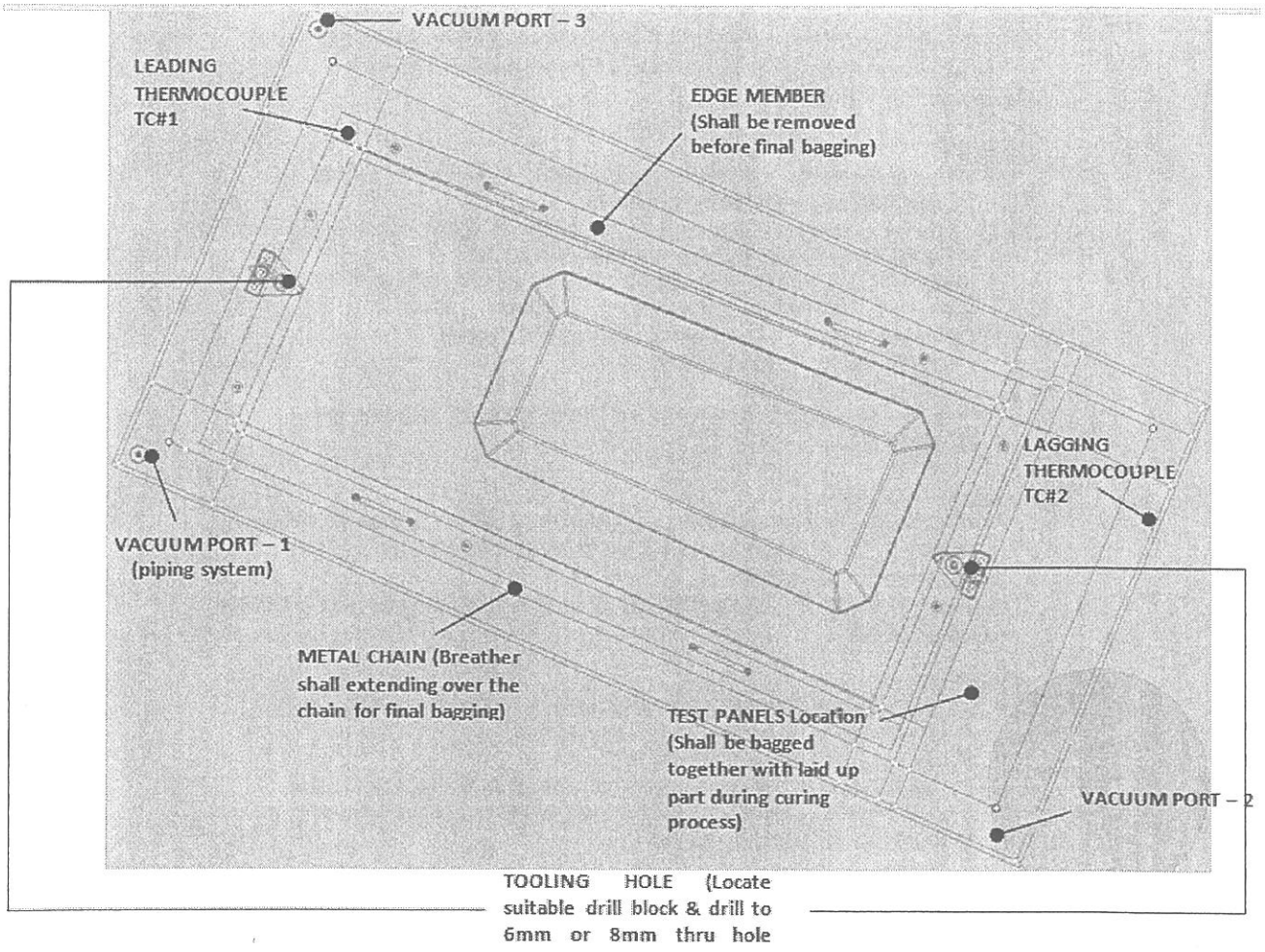
Figure 9: Final Bagging Technique

C RM AERO-COMPOSITES SDN. B D.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2



Note:

(*)Drum peel test specimens can be independently molded on mold over-length or on additional test plate depending of the curing configuration (one mold or 2 molds placed in series on the same vacuum line in the autoclave (refer to paragraph 6.1 in the CMR).

Figure 10 : Thermocouples / Vacuum Ports / Test Panel / Edge Member / Tooling Holes location.

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
CAC/SON/002	A350SON- 0203- 01	A

Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0340	DN-CURE	Autoclave **Note: the curing of the component shall be completed before the expiry of room temperature shelf life of the pre-impregnated and other incorporated materials.** **Operation** 1. Release the vacuum from the bag at least 2 hours before curing. 2. **Record release time before curing.** 3. Stack up mould on curing regulator. Ensure all thermocouples cable is in direction to autoclave thermocouple socket area. 4. Refer to **Figure 11 (page 22)** for mould tool loading in autoclave. 5. Set up all thermocouples into autoclave system. 6. Link each vacuum pots to autoclave vacuum suction. 7. Upload correct curing recipe. 8. Cure in the autoclave. 9. **Record autoclave curing number in Work Order Routing for traceability.** **Important Notes:** • **Ensure both vacuum suction and monitoring hoses are plugged in properly to the vacuum ports (even though there is no vacuum application in the recipe).** • **Ensure the vacuum bag for test panel is connected to the part bagging (if applicable).** **Inspection** 1. Ensure all thermocouples are serviceable & connected to the system. 2. Ensure bagging is link to the vacuum system. 3. Ensure the curing recipe is correct. 4. Ensure the curing process is correct by monitoring cure cycle chart. 5. Print and attach curing profile/chart with Work Instruction, if found any abnormality in curing condition.	**File name:** A350 Bottom Panel: Curing recipe - Issue 1

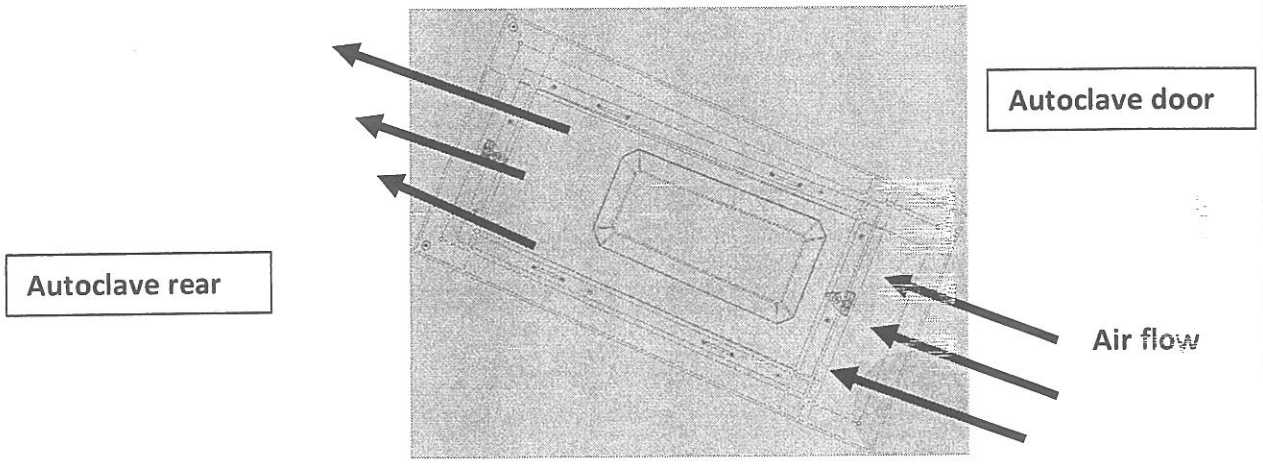


Figure 11 : Mould Tool Loading in Autoclave

WI WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
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Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0350	DN-DEML	**Demould** **Operation** 1. Remove the vacuum bag and breather. 2. Drill the tooling holes (2 off) using "king hole blocks" and standard drill gun. Holes are to be **6mm** and **8mm** in diameter (**Figure 10 page 21**). 3. Remove release film and Peel ply. 4. Demould the panel from its mould tool **Note: Do not cut tooling lugs until CMM inspection is complete!** **Inspection** 1. QC inspector to visually ensure the component is free from surface defects and damage as per requirement below.	**Tool number:** **(SONACA Number)** 62 - 000247 - 00 - 01 - D 293 - V574 67051 000 [LH]
0360	DN-DEML	**Part Marking** **Operation** 1. Marks part using Staedler black ink. 2. Refer **Figure 12 (Page 23)** below for the location and available area. 3. Marking shall contains: • 1st line - Part Number. • 2nd line - Job Order Number. **Inspection** Ensure clear marking and all info are stated. **Note:** This operation is for temporary basis. Permanent part marking will be carried out after finishing assy operation.	

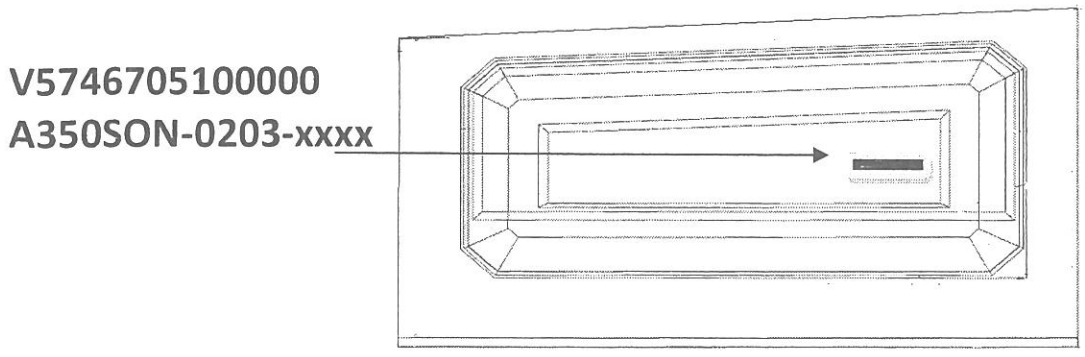

Figure 12 : Part marking location (on bagging surface)

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
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Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

No.	TYPICAL DISCREPANCIES	ACCEPTABLE VALUES WITHOUT REWORK	ACCEPTABLE VALUES WITH REWORK	REWORK METHODS
1	Superficial scratches	Unlimited provided that fibres are not damaged and do not exist exposed fibres.	Fibres damaged: None	Not applicable
			Exposed fibres, but not damaged: Unlimited	Rework with resin (AIMS 08-02-001) This method does not apply if the reworked surface of the part is to be subsequently bonded
2	Surface depressions on:			
	a) Tool face side	Unlimited if the depressions have a depth ≤ 0,13mm Unlimited if the depression depth is between 0,13 and 0,25mm by 25 mm of greatest dimension in an area of 30 cm x 30 cm Depressions shall be separated at least 150 mm from the part contour, from a hole or from another depression	5% maximum of the part surface if depressions have a depth ≤ 0,5mm and the greatest dimension is ≤ 50 mm Depressions shall be separated at least 150 mm from the part contour, from a hole or from another depression	Fill with aerodynamic epoxy paste smoother.
	b) Bag face side	Unlimited if the depressions have a depth ≤ 0,5mm Depressions shall be separated at least 150 mm from the part contour, from a hole or from another depression	5% maximum of the part surface if the depressions have a depth ≤ 1 mm and the greatest dimension is ≤ 100mm Depressions shall be separated at least 150 mm from the part contour, from a hole or from another depression	Fill with aerodynamic epoxy paste smoother and reapply the PVF film if applicable
3	Delaminations, voids disbonds and others defects detected by NDT.	In accordance with the associated documentation to the drawing	–	–
4	Bridging on: a) Core contour and fillet radius at core section 	A lack of contact with maximum dimensions of 3 mm width by 12 mm length (as a total of all the lengths of all the discrepancies) every 300 mm of contour length.	A lack of contact with maximum dimensions of 6 mm width by 50 mm length (as a total of all the lengths of all the discrepancies) every 300 mm of contour length	Inject resin (AIMS 08-02-001)

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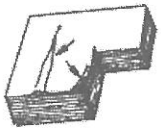
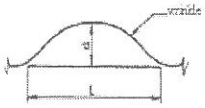
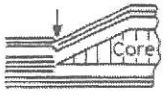
5	Resin ridges a) Bag face side, and non-aerodynamic surfaces 	Unlimited if the maximum height is ≤ 0,5 mm, provided that the final dimensions be within the permitted tolerance.	Unlimited, provided it does not contain fibres	Remove by means of soft sanding
	b) Tool face side or coupling surfaces	Unlimited if the maximum height is ≤ 0,1 mm and provided it does not affect the coupling requirements		
6	Inclusions of foreign materials at the surface	None	One inclusion of 10 mm maximum dimension for each 30 cm x 30 cm, provided that second ply suffers no damage The inclusions must be separated at least 150 mm between them	Remove inclusion and fill with resin (AIMS 08-02-001) Reapply the glass fiber or tedlar if applicable
7	Ply wrinkles. 	Unlimited if: d < 2 mm L/d ≥ 5 Number of plies affected ≤ 25%	None	Not applicable
8	Depression on the core contour 	10% maximum of the contour length, with a maximum depth of 0,25 mm.	None	Not applicable
9	Lack of flatness on coupling surfaces	A maximum of ± 0,25 mm except in ply splicing or ending areas, where the drawing shall indicate the tolerance	None	Liquid shim for fitting
10	Part warping.	Unlimited in case warping or torsion -to maintain detail parts at position on a flat surface meeting drawing requirements- is removed applying finger pressure.	None	Not applicable

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Part No.	Description	Part Issue
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11	Of the waterproof ("Tedlar") film: Cuts, wrinkles, ridges, separations on splices, lack of Tedlar, unbonded or burnt Tedlar, etc.	None NOTE: ridges or wrinkles with height ≤ 0,25 mm are acceptable	100% of the surfaces provided that the fibers are not damaged	Rework the waterproof film
12	Unravelled areas, burrs or small delaminations on the machined contours NOTE: It shall only affect the last ply	If the last ply is fabric: 2 mm maximum, measured perpendicularly to the contour with a total maximum length (all defects) ≤ 100mmm per each meter of contour trimming part	. 4 mm max. measured perpendicularly to the contour in a total maximum length (all defects) ≤ 100 mm each meter of contour trimming part . Unlimited for burrs	Cover with resin (AIMS 08-02-001) Remove burrs by soft sanding
		If the last ply is tape: 1 mm maximum, measured perpendicularly to the contour with a total maximum length (all defects) ≤ 100mm per each meter of contour trimming part		
13	Defects of the core in "sandwich" structures: a) Partial node bond separation	Maximum 5% of the total number of nodes, and maximum 25% of the nodes contained in an area of 45 cm^2	None	Not applicable
	b) Total node bond separation	Maximum 1% of the total number of nodes, and maximum two nodes in an area of 50 mm x 50 mm		
	c) Core chamfer or contour waviness	Up to ± 1,5 mm		
14	Lack of resin (resin starvation) on surface and pinholes	Pinholes unlimited provided that the pore Ø is ≤ 0,5 mm and the number of pores is < 15 per cm^2	Pores of Ø ≤ 0,5 mm and the number of pores ≥ 15 per cm^2	Apply epoxy pore filler
		Lack of surface resin, S_1<1 cm^2 and S_2<5%A, where: S_1: local lack of resin area S_2: Total surface areas with lack of resin A: Total surface of the element	For lack of surface resin, unlimited, provided that no fibres without resin appears on the surface and it does not affect the second layer	Apply resin (AIMS 08-02-001)
15	Telegraphing on sandwich structures ("Telegraphing")	Tool side: Unlimited, provided it has a depth < 0.05 mm.	Tool side: Unlimited if depth of depression is comprised between 0.05 and 0.1 mm.	Fill with material (A) 1 (EA 960 F A/B)
		Bag side: Unlimited, provided depression is below 25% of core cell diameter, not exceeding 1 mm depth.	None	Not applicable

16	Delaminations visible from the exterior	None	Maximum depth 3 mm measured perpendicular to the contour	Inject resin from the edge (AIMS 08-02-001)
17	Lack of material in the laminate edges	Drawing tolerances	Maximum width 1 mm and maximum length 50 mm	Use wet lay-up resin (AIMS 08-02-001) with Aerosil and apply on the surfaces a type 120 glass fabric layer with resin (AIMS 08-02-001)
18	Absence or displacement of the exterior glass fabric layer in Carbon fabric composite materials	None	Unlimited	Apply on the surface a type 120 glass fabric layer with wet lay-up resin (AIMS 08-02-001)

TABLE 11 (Con't)

(A)

MATERIAL[1]					CURE[3]	
COMMERCIAL DESIGNATION	MANUFACTURER	MIX	MIXING QUANTITY (g) [4]	MIX POT LIFE (min)[3] [4]	CURE AT LOW TEMP.	CURE AT HIGH TEMP. [4]
EA 960 F A/B	HENKEL CORP.	Parts by weight: A: 100 ± 1 B: 50 ± 0,5	100	30 at 23°C	24 hours at 23°C [2]	1 hour at 70°C
EPIBOND 156 A/B	HUTSMAN	Parts by weight: A: 100 ± 1 B: 6 ± 0,1	100	30 at 23°C	3 days at 23°C [2]	2 hours at 25°C + 2 hours at 65°C

Notes:

(1) The use of materials EA 960 F (aerodynamic smoother) or EPIBOND 156 A/B (pore filler) shall depend on the type and size of the pore, gap or other defect.

(2) It is possible to work 6 hours after application.

(3) The temperature indicated in the table shall have a ± 5°C tolerance. The times indicated are minimum times in the case of curing times and maximum for application times.

(4) These are guideline values.

Table 6: General Acceptance Criteria for Cured Finished Part.

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Part No.	Description	Part Issue
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0370	DN-TRIM	**CNC** **Trimming and Drilling Works** **Operation** 1. Retrieve correct panel. 2. Position panel onto routing fixture. 3. Secure panel using pins **6mm** and **8mm** to two king holes locating onto routing jigs. Quick grip/clamp (if required). 4. Apply vacuum suction. 5. Set-up datum reference for cutting reference. 6. Set-up CNC programme to correct CNC (routing & drilling) file. 7. Run routing process. 8. Drill thru all holes in **Figure 13 (page 29 & 30)** in accordance with AIPS01-02-005. Refer drawing **V57467051** for details. 9. Ensure machining temperature not exceeding 180 deg c. 10. Machining & break sharp edges. 11. Deburr trimmed edges. **Inspection** 1. Ensure correct panel is retrieved. 2. Ensure panel is secured properly onto routing jig. 3. Ensure correct programming file used. 4. Ensure correct router for trimming. 5. Ensure smooth edges after deburring process. 6. Ensure all holes drilled using correct bit. 7. Ensure holes meet the particular requirement. Hole diameter tolerance is as **Figure 13 (page 29 & 30).** 8. Ensure all holes are free from visible damage. 9. Qc inspector to check drilled holes diameter, by using go-no go gauge and record data into form 309b. 10. **Record trimming & drilling temperature into Work Order Routing.** 11. **Record CNC file name on Work Order Routing.**	**Tool number:** 62 - 000260 - 00 - 01 - D453 - V574 67051 000 [LH] **File name:** NC57467051_0A **Go-no-go gauge:**
0380	DN-INSP	**CMM Inspection -Inspect to Drawing Requirements** **Operation** 1. Panel position shall be seated properly with good mating between tool surface and panel. Apply vacuum suction to support panel positioning. 2. **Refer Figure 13 (page 29 & 30) for details.** 3. Perform CMM inspection on • EOP panel • fastener hole positioning. • fastener hole diameter. • surface profile. 4. **Record CMM file name & report number in Work Order Routing.** 5. If any non-conformance occurs, print and attach CMM report together with Work Instruction. 6. **Record all KC inspection result in the KC form.** **Inspection** Tolerances : **Refer to Figure 13 (page 29 & 30).**	**CMM file name:** CMM57467051_0A

* Format for date must be **DD/MM/YY**

WI	WORK INSTRUCTION

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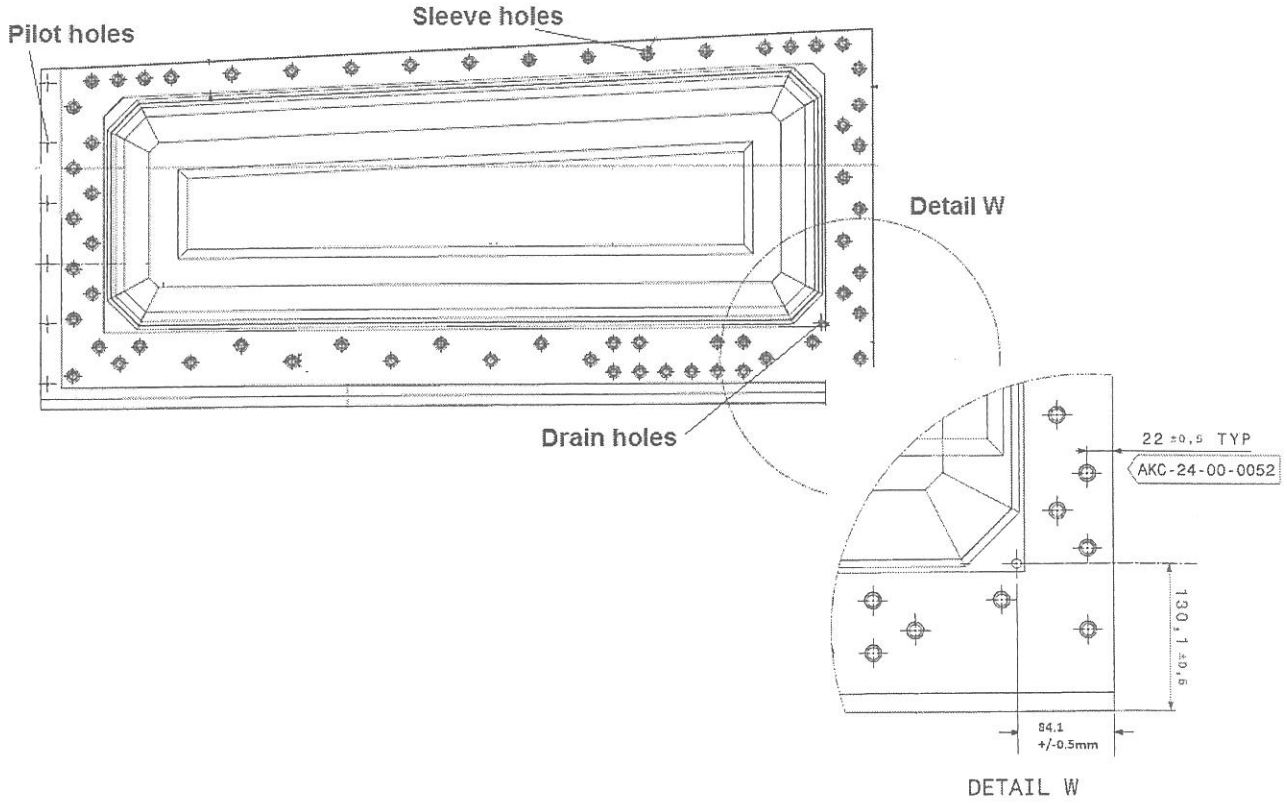
Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2



Subject Description	Hole diameter / EOP / OML Tolerance	Bit/ Router Size & Type	Indication on Figure	Hole Qty	Hole position tolerance
Sleeve holes	10.50mm – 10.55mm	Bit 10.5mm pcd	Sleeve Holes	62	⌖0.25mm
Pilot holes	3.55mm – 3.65mm	Bit 3.6mm pcd	Pilot Holes	6	⌖0.5mm
Drain hole	8.00mm -9.00mm	Bit 8.5mm pcd	Drain Hole	1	⌖0.5mm
EOP profile	±0.5mm	Router 8mm	EOP	-	-
Oml surface profile	±0.4mm	-	OML	-	-

Note :
i. All holes to be drilled thru & normal to fairing OML; unless otherwise stated.
ii. No countersinking process at this stage; unless otherwise stated.

Figure 13: Panel specification for CNC & CMM works [view from non-flying surface] (cont'd)

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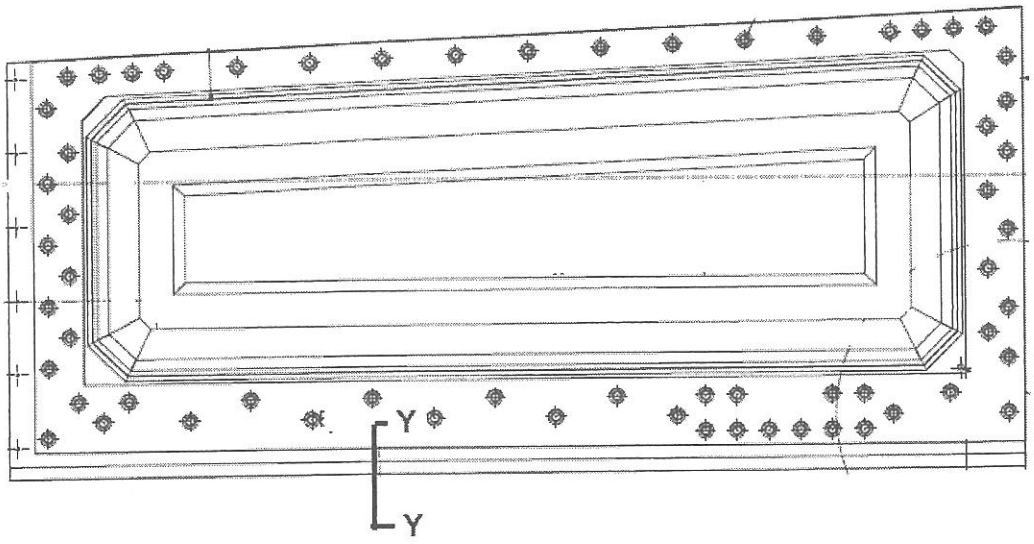
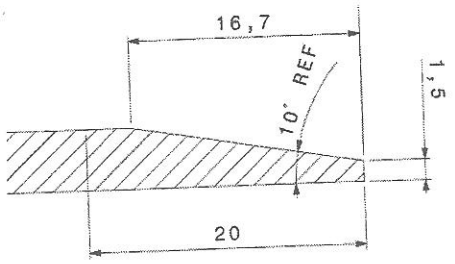
Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2





SECTION Y-Y

Chamfer specification on Panel 5LH [view from non-flying surface]

Subject Description	Criteria	Bit/ Router Size & Type	Indication on Figure	Section	Acceptable tolerance
Section X-X Chamfered edges	Angle	Router 20mm	10°	Y-Y	-
	Final edge thickness		1.5		1.0mm - 2.0mm
	Affected width		16.7		16.2mm - 17.2mm

Figure 13: Panel specification for CNC & CMM works [view from non-flying surface] (end)

WI	WORK INSTRUCTION

Contract/Project	Work Instruction	Revision
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Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

0390	DN-NDT	IGNORE THIS PROCESS AND PROCEED TO OPERATION 400 UNLESS THIS ALTERNATIVE IS BEING REQUESTED AS BELOW. In order to support manufacturing planning and optimization, Manufacturing Engineering department allows NDT inspection to be performed immediately after CMM inspection process. However, the authorization or permission shall be given earlier by the planning department and with an acknowledgment of Manufacturing Engineer. Cross note *'Do not perform this operation unless instructed. Inspection will be performed in Operation 450.'* with pen and record details information. <u>Non-Destructive Test Inspection</u> Operation 1. Retrieve correct panel for scanning. 2. Retrieve correct NDT reference panel. 3. Perform NDT inspection on panel in accordance with CMR (A350 Bottom Panel). 4. **Record NDT file number for traceability in the Work Order Routing.** Inspection 1. Ensure correct panel retrieved for scanning. 2. Ensure correct NDT reference panel used. 3. Ensure operation as per CMR requirement. 4. Ensure details info is recorded.	NDT Reference Panel identification: A350 BP NDT reference Panel
0400	DN-INSP	<u>Dimensional check</u> **Landing thickness inspection** 1. Refer **Figure 16 (page 32)** for panel thickness requirement. 2. Measure and record the cured panel thickness of monolithic area (hatched area).	

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Part No.	Description	Part Issue
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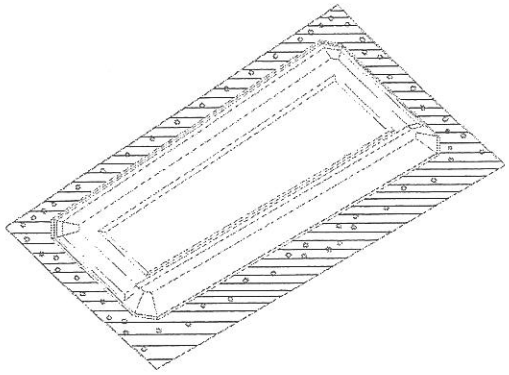

Thickness requirement for hatched area:
4.06mm – 4.74mm.

Figure 16: Thickness requirement for Panel 5 LH

0410	DN-INSP	**Drill Damage Inspection** **Inspection** There shall be no scratching / scoring / delamination / unbroken fibers within the hole. When drilling hybrid stacks there shall be no degradation or damage of the carbon part by metallic swarf. 1. Inspect the drill damages at entrance and exit surfaces to AIPS01-02-005 using at least 10x magnifying glass and caliper. 2. Record only dimensions that greater than permitted ones in form 314. • **Permitted drill damage entrance surface (IML Surface)** Damage on the entrance surface of countersunk holes is **not** acceptable. • **Permitted drill damage exit surface (OML / Countersunk Surface)** The maximum permitted damage on the exit surface of plain holes is specified in the **Table 8 (Page 33)** below.	

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Nominal Hole diameter (mm)	Depth Dimension, H (mm)	Defect Dimension A (mm)		Remarks
		Thin part <5mm	Thick part >5mm	
<3.2		2	2	
3.6		2	2	
4		2	2.5	
4.8		2	2.5	
5.6		2	2.5	
6.4		2.5	2.5	
8		3	3	
9.5	0.35	3	3	
11.1		4	4	
12.7		4	4	
14.3		4	4	
15.9		4	4	
19		4.75	4.75	
22.2		5.5	5.5	
>25.4		6.5	6.5	

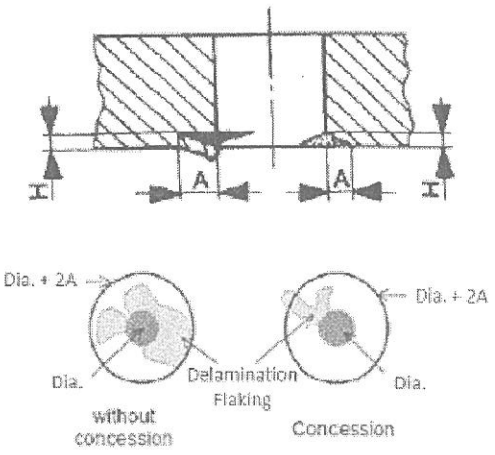

Table 8: Damage acceptability limit for drill entrance face.

0420	DN-ASSY	<u>Remove Tooling Lugs</u> **Operation** 1. Carefully cut-off / remove tooling lugs **2-off** to the final panel EOP using disk cutter. 2. Use a 320-grade 'dry' abrasive paper to deburr panel edges & to meet EOP requirement. Refer **Figure 14 (Page 34)** for details. **Inspection** 1. Ensure that any surplus has been removed from the panel & panel EOP is smoothed by using straight bar / ruler.	

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Part No.	Description	Part Issue
V5746705100000	A350XWB: D. NOSE PANEL 5 - LH	-A.2

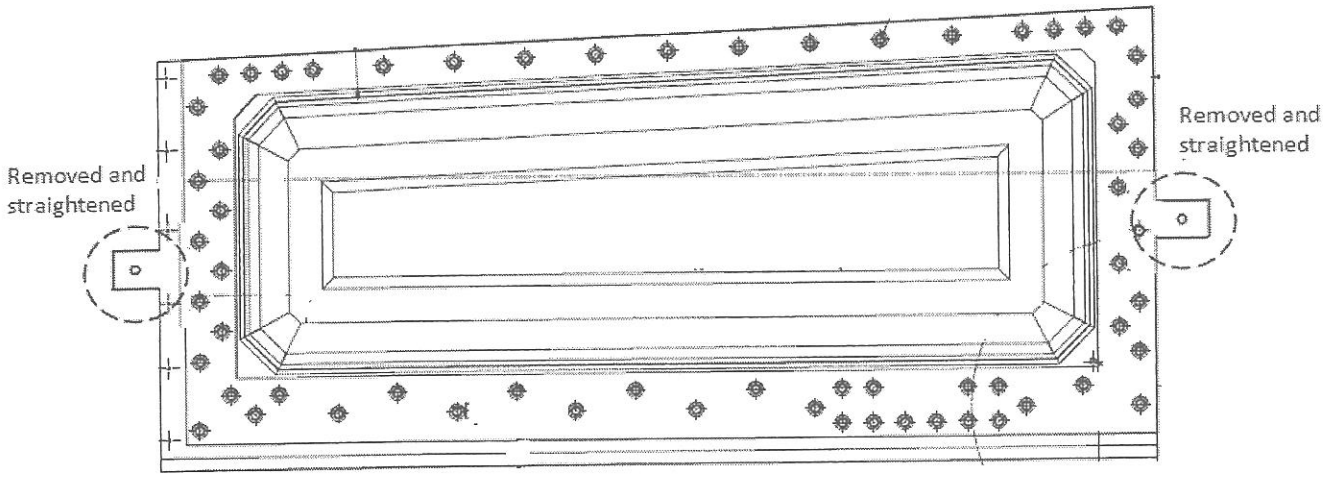

Figure 14 : Lugs to be removed
[view from non-flying surface]

0430	DN-ASSY	**Sealing all cut edges in accordance with AIPS05-05-009** **AIMS 10-07-004** **Temperature & humidity.** **15°C & 35%** **30°C & 85%** 1. Mix resin seal (EC2216) to AIPS05-05-009. 2. Mixing ratio • **by weight is Part B (5) : Part A (7)** • **by volume is Part B (2) : Part A (3)** **Note: Part B is white colour** **Part A is gray colour.** *Description* / *Parameter* **Pot life (23 °c)** / **2 hours** **Curing time (65± 5°c)** / **2 hours** 3. Record material details in Work Order Picklist. 4. Clean application area using a cleaning solvent selected from ABR9-0140 Appendix D, PFSR. Ensure surface to be applied with EC2216 mixture is smooth, clean and dry. 5. Apply mixture on • **all panel EOP** • **bare holes** • **composite cutting edges (including chamfered surface).** Remove excess accordingly.	

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Part No.	Description	Part Issue
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		6. Force drying in oven as per AIPS05-05-009. ▪ **2 hours at 65 ± 5 °c** 7. Record • **start time** • **finish time** • **temperature** in Work Order Routing. **Inspection** 1. Ensure details are recorded.	
0440	DN-ASSY	**Leak Test** **Equipment and Materials** A hot water tank for leak testing of production components shall be filled with demineralized or distilled water. The water temperature shall be (70 to 80)°C. **Operation** 1. Perform leak test in accordance with AITM2-0037 (Procedure 1). **Method of Procedure 1: Immersion in hot water.** 1. The immersion shall be totally immersed in clean water as stated above. 2. The immersion time shall be in accordance with **Table 7 (Page 36).** 3. During immersion the part shall be critically examined for the egress of streams of small bubbles which indicate leakage of gas from the sandwich core. 4. The part shall be removed from the water and dried quickly as possible to minimize water absorption and possible water ingress during cooling. 5. Record **"Leakage or No Leakage"** status in Work Order Routing. Note: • Areas from which bubbles were detected shall be marked. Inform quality programme if this happen. • Part shall not be submerged to a greater depth than necessary to permit the detection of escaping bubbles. Depth of immersion shall be <1m. • when total immersion of part is not possible due to its size or shape, partial immersions are permitted provided that all areas are checked and examined. • When retests or partial immersions are required the retest or next partial immersion shall not occur until the part has regained ambient temperature.	

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Contract/Project	Work Instruction	Revision
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Part No.	Description	Part Issue
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		• When appropriate, the part shall be turned through 180° during immersion to assure that no defect areas are missed. **Table 7: Immersion Time**	
0450	DN-NDT	**Non-Destructive Test Inspection** **Operation** 1. Retreive correct panel for scanning. 2. Retreive correct NDT reference panel. 3. Perform NDT inspection on panel in accordance with CMR (A350 Bottom Panel). 4. **Record NDT file number for traceability in the Work Order Routing.** **Inspection** 1. Ensure correct panel retreived for scanning. 2. Ensure correct NDT reference panel used. 3. Ensure operation as per CMR requirement. 4. Ensure details info is recorded. Note: If the NDT inspection has been performed at operation 390, proceed to the next process. Write N/A on the Work Order Routing.	**NDT Reference Panel identification:** A350 BP NDT reference Panel
0460	DN-INSP	**Weigh Panel** **Operation** 1. Weight panel assy and record the value in Work Order Routing and form Insp 424 method of recording **(if applicable)**. **Note:** **If this oper is not applicable, write "n/a" on Work Order Routing.**	
0470	DN-INSP	**Final Inspection** 1. QC inspector to visually ensure the component is free from surface defects and damage. 2. Check all operations have been carried out satisfactorily and close paperwork. 3. Compile all required documentations together with the panel. 4. Compile test results. 5. Compile OML surface profile inspection report for KC in a specified file (data compilation.	

Part Skin Material	Skin Thickness	Minimum	Maximum
Composite	<5mm in all areas	30 seconds	60 seconds
Composite	>5mm in some areas	60 seconds	120 seconds

FIRST ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0203-0027
ID: 4510441
Lot/Serial:
Item Number: M-V5746705100000
D.NOSE PANEL 5 [LH] V5746705100000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 02/01/14
Due Date: 02/01/14
Routing Code: M-V5746705100000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
B-RM-00-042 ADHESIVE FILM FM300M03	GR316315 5504 ROll# 0002 IPS10-01-006-02	1.84	SM 0	(1.84		15.10.14	1600	27.1.14	AC 686 PROD
BAD-024-01 MODIFIED EPOXY ADH ESIVE EC2216 PART B/A GR AY	GR304000 45/4843FR AIMS 10-07-004	13.5	GM 0	(9Gm)		02/08/15		27/02/14	AC 686 PROD
BAF-007-43 LOCTITE HYSOL EA96 95.05K AIMS 10-01-006	GR313587 JH3KSJ0857 ROLL # SJ IPS10-01-006-01	1.6	SM 0	( )		21/05/14	1600	27/01/14	23114
BBM-006-01 Bronze Mesh CuSn6/8552/RC38 AW 80	GR313403 P13A14 ROLL # 01A IPS05-12-001-02	1.69	SM 0	( )		03/10/14	1600	27/01/14	23774
									23774

Format for date must be DD/MM/YY

REG._NO.:_229D-F

WORK ORDER PICKLIST

Work Order: A350S-0203-0027
ID: 4510441
Lot/Serial:
Item Number: M-V5746705100000
D.NOSE PANEL 5 [LH] V5746705100000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 02/01/14
Due Date: 02/01/14
Routing Code: M-V5746705100000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
BBM-006-04 SURFACE MASTER 905 SM905M.045 psf 48"	GR285710 220 ROLL # 0003 AIMS 10-06-001	1.33	SM 0	( )		27/02/14	1600	27/01/14	AC 267 PROD
BCW-002-~~21~~ 03 CARBON WOVEN 8552S/37%/AGP280/C 1500MM	GR314761 P93B21 ROLL # 13A AIMS 05-01-004	13.4	SM 0	( )	9/9/14 E.I.E 2168	19/11/14	1600	27/01/14	23774 AC 267 PROD
BGW-003-12 GLASS EPOXY @ 1270 mm 8552/7781,RC37	GR313475 P13809 ROLL # 19A AIMS 05-02-003	0.846	SM 0	( )		30/09/14	1600	27/01/14	23774 AC 267 PROD
BOT-008-35 TEDLAR(TGH15BL3) DAN95M	GR226627 1003TT0368	0.539	SM 0	(0.539)				31/01/14	23774 AC 820 PROD
CTP-002-06 Flash Breaker Tape 1"		1.0	M 0	( )					AC 820 PROD

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIRST ARTICLE INSPECTION

WORK ORDER PICKLIST

Work Order: A350S-0203-0027
ID: 4510441
Lot/Serial:
Item Number: M-V5746705100000
D.NOSE PANEL 5 [LH] V5746705100000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 02/01/14
Due Date: 02/01/14
Routing Code: M-V5746705100000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
CTP-002-06 Airtech 2R(HT) - RED						*** Cont			
DBF-003-02 Bag Fm - WL7400-54 "CF	GR306016 A-011880.	3.987	SM 0	(3.987				31/01/14	AC 320 PROD
DBT-004-01 Breather N10 NW 339 HA	GR309616. (840.	2.865	SM 0	(2.865)				31/01/14	AC 320 PROD
DOT-006-04 Sealant tape (GS213)	GR303122 BV032122	11.94	M 0	(11.94)				31/01/14	AC 320 PROD
DPP-002-07 Peel ply (60B/R 700mm)	GR261318 T-009073	0.333	SM 0	(0.33))				31/01/14	AC 320 PROD

Format for date must be DD/MM/YY

WORK ORDER PICKLIST

Work Order: A350S-0203-0027
ID: 4510441
Lot/Serial:
Item Number: M-V5746705100000
D.NOSE PANEL 5 [LH] V5746705100000
Remarks:
Qty Ordered: 1.0 EA
Qty Completed:

Issue Date: 02/01/14
Due Date: 02/01/14
Routing Code: M-V5746705100000-A
ORI WO:
Sales/Job:
Deliver To:

Item Number	Kit No, GR No & Batch No	Required Qty	UM	Issued Qty	Remark	Shelf Life Expiry Date	Time Out Of Freezer	Date	Enter and Verify By
DRF-001-17 Release Film NP		0.871	SM 0	( )					
Tygavac RF-242-R	N/A								
DRF-001-18 Release Film P	GR3049305	1.994	SM 0	(1.994				31/01/14	AC 020 PROD
Tygavac RF-242-RP	L025616.								
M-V5746705122000 H.CORE PANEL 5 [LH] V5746705122000	4P0031	1.0	EA 0	( )				31/01/14	AC 020 PROD

Format for date must be DD/MM/YY

REG._NO.:_229D-F

FIRST ARTICLE INSPECTION

CTI A AERO-COMPOSITES SDN. HD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203-0027	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
0101 0102	DN-KIT	010.	• Withdraw materials • Record all info in Work Order Picklist & Picklist Attachment. **Nesting file name / Revision** SLBP5W: ~~E~~ D SNLXXV: ~~A~~ B SNLXXM: ~~A~~ B SNLXXN: ~~A~~ B SNLXXL1: B SNLXXL2: B AC 19 ME BE 30/1/2014	28/01/14	AC 267 PROD		AC 73 INSP
		020.	• Plies stacking process • Kit labeling and identification	28/01/14	AC 267 PROD		AC 73 INSP
0301 0302	DN-LAY	030.	• Receive correct mould tool. • Ensure mould tool is prepared & visually free from defect TOOL PREPARED Date D/NOSE Stamp AC 803 PROD 28 JAN 14-00140 014B-S	31/01/14	AC 803 PROD		AC 126 INSP 30719
		040.	• Receive correct kit for lay up	31/01/14	AC 803 PROD		AC 126 INSP 30719
		050.	**Honeycomb core drying ; Oven drying** Requirement: 120deg for 2 hours Date in: 30/01/14 Time in: 8.30 Temperature: 120°C. Oven no.: 03	31/01/14	AC 803 PROD		AC 126 INSP 30719

Format for date must be DD/MM/YY

Reg. No.: 228CF

CTR. AERO-COMPOSITES SDN. L ID.

WOR — WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		060.	• Operator & inspector understand the requirement.	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		070.	• Lay up plies Stack #1	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		080.	**Compaction** Vacuum reading: 27.6 inHg.	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		090.	• Lay up plies 4	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		0100.	• Lay up plies 5	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		0110.	• Lay up plies 6	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		0120.	**Compaction** Vacuum reading: 26.6 inHg	31/01/14	AC S20 PROD		AC 126 INSP 20/1/14
		0130.	**Honeycomb core ; Oven drying** Requirement: 120deg for 2 hours Date out: 31/01/14. Time out: 10.30 Temperature: 120°c Oven no.: 03 • Enveloping honeycomb core with EA9695.05K	31/01/14.	AC S20 PROD		AC 126 INSP 20/1/14

Format for date must be DD/MM/YY

Reg. No.: 228CF

FIRST ARTICLE INSPECTION

CTI..M AERO-COMPOSITES SDN. .HD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0140.	• Enveloping honeycomb core with FM300M03	31/01/14	AC S20 PROD		AC 120 20719
		0150.	• Locating honeycomb core	31/01/14.	AC S20 PROD		AC 120 20719
		0160.	**Compaction** Vacuum reading: 28-1 inHg	31/01/14	AC S20 PROD		AC 120 20719
		0170.	• Lay up plies 7	31/01/14	AC S20 PROD		AC 120 20719
		0180.	• Lay up plies 8	31/01/14	AC S20 PROD		AC 120 20719
		0190.	• Lay up plies 9	31/01/14	AC S20 PROD		AC 120 20719
		0200.	• Lay up plies 10	31/01/14	AC S20 PROD		AC 120 20719
		0210.	• Lay up plies 11	31/01/14	AC S20 PROD		AC 120 20719
		0220.	**Compaction** Vacuum reading: 28-1 inHg	31/01/14	AC S20 PROD		AC 120 20719
		0230.	• Lay up plies 12	31/01/14	AC S20 PROD		AC 120 20719
		0240.	• Lay up plies 13	31/01/14	AC S20 PROD		AC 120 20719

Format for date must be DD/MM/YY

Reg. No.: 228CF

CTR. AERO-COMPOSITES SDN. B. ID.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0250.	• Lay up plies 14	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0260.	• Lay up plies 15	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0270.	• Lay up plies 16	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0280.	**Compaction** Vacuum reading: 26.7 inHg	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0290.	• Lay up ply GFRP	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0300.	• Lay up Tedlar	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0310.	• Thermocouples installation.	31/01/14	AC 320 PROD		AC 126 INSP 20719
		0320.	**Final bagging** Requirement: vacuum loss rate (2.0 inch Hg) in 5 minutes.. Vacuum loss: 26.2 inHg Measuring time: 5 minutes.	31/01/14	AC 320 PROD		AC 126 INSP 20719

Format for date must be DD/MM/YY

Reg. No.: 228CF

FIRST ARTICLE INSPECTION

CTRM AEROSPACE SDN. BHD.

WOR — WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
		0330.	**Test Panel WOR number** Requirement: 1 monolithic + 3 drumpeel	21/01/14	AC 820 PROD		0719.
3401 3402	DN-CURE	0340.	• Stack up mould • Connect thermocouples **Curing** Data file AC4-20140203-001 Autoclave number AC4	03/02/14	AC 164 PROD		AC 127 INSP
3501	DN-DEML	0350.	• Demould • Remove vacuum bag & breather • Drill tooling lug • Demould panel	03 FEB 2014	AC 133 PROD		AC 127 INSP
		0360.	• Part marking	03 FEB 2014	AC 133 PROD		AC 127 INSP
3701 3702	DN-TRIM	0370.	**CNC trim & drill** Filename NC5746705I-0A Temperature 220C	05/02/14	AC 421 PROD 23263		AC 108 INSP
3801 3802	DN-INSP	0380.	**CMM inspection** Check EOP, OML, holes position & diameter. Filename cmm 5746705_0A Report number CAe/cmm/14-1179 CAe/cmm/14-1183	09/02/14			AC 69 INSP

CTR.. AERO-COMPOSITES SDN. L. ID.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
3901 3902	DN-NDT	0390.	Do not perform this operation unless is instructed. Process will be performed at Operation 450. **NDT inspection** Filename:				
4001	DN-INSP	0400.	• Dimensional check • Measure & record panel thickness in form 103.	21/02/14			AC 170 INSP
		0410.	• Hole, burr & breakout insp.	21/02/14			AC 170 INSP
4201 4202	DN-ASSY	0420.	• Remove Tooling Lugs	25/2/14	AC 321 PROD		AC 98 INSP 23680
		0430.	**Sealing cut edges** Start time: 14.00 Finish time: 16.00 Temperature: 65°C Oven no.: 9	27/2/14	AC 321 PROD		AC 98 INSP 23680
		0440.	**Leak test** (Cross if fail): OK	4/3/14	AC 321 PROD		AC 98 INSP 23680
4501 4502	DN-NDT	0450.	**NDT inspection** Filename: MX1-14-0270	06/03/14			AC 23 NDT

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CTRM AERO-COMPOSITES SDN. BHD.

WOR WORK ORDER ROUTING

Work Order	Work Instruction No	Work Instruction Rev	Routing Code	Date
A350SON-0203	A350SON-0203-01	A	M-V5746705100000-A	24/12/2013

Part No	Description	Part Issue
V5746705100000	A350XWB: D.NOSE PANEL 5 LH	-A.2

OPS ERP	WORK CENTER	PROCEDURE					
		OPS WI	DESCRIPTION	DATE COMPLETE	OPERATOR	APPROVED OPERATOR	INSPECTOR
4601 4602	DN-INSP	0460.	• Panel weight measurement 4.7 kg	07/04/14			
		0470.	• Check all operations • Compile all required documentations.	09/04/14			

Format for date must be DD/MM/YY

Reg. No.: 228CF

C[illegible]RM AERO-COMPOSITES SDN. B[illegible]D.

PA PICKLIST ATTACHMENT

Work Order # : A350S - 0203 - 0027

ID : 4510441

Part Number: : V5746705100000

FRIDGING/ KIT MATERIAL LIFE RECORD

Material 03 **BCW-002-~~21~~** CARBON FIBRE ABS5003B0000/ AIMS-05-01-004 8552S/37%/AGP280/C	Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14
Ambient Life Left (hour) 303	Out Time Remaining (hour)			Out Time Remaining (hour)			0340 am / pm
Stamp AC 267 PROD	Stamp			Stamp			Stamp AC 164 PROD
In	Date*	Time	In	Date*	Time	In	Date* Time

Material **BGW-003-12** GLASS SCRIM ABS5009F40EP250 AIMS-05-02-003 8552/37%/7781	Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14
Ambient Life Left (hour) 214	Out Time Remaining (hour)			Out Time Remaining (hour)			0340 am / pm
Stamp AC 267 PROD	Stamp			Stamp			Stamp AC 164 PROD
In	Date*	Time	In	Date*	Time	In	Date* Time

Material **BBM-006-01** BRONZE MESH ABS5317AA2/ AIMS-05-12-001A IPS-05-12-001-02 CuSn6/8552,RC38,AW80	Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14
Ambient Life Left (hour) 208	Out Time Remaining (hour)			Out Time Remaining (hour)			0340 am / pm
Stamp AC 267 PROD	Stamp			Stamp			Stamp AC 164 PROD
In	Date*	Time	In	Date*	Time	In	Date* Time

* Format for date must be **DD/MM/YY**

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PA PICKLIST ATTACHMENT

Work Order # :

ID :

Part Number: : V5746705100000

Material **BAF-007-43** FILM ADHESIVE HYSOL EA9695.05K AIMS-10-01-006		Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14	
	234	Out Time Remaining (hour)			Out Time Remaining (hour)			0340	am / pm
Stamp	AC 267 PROD	Stamp			Stamp			Stamp	AC 164 PROD
In	Date* Time	In	Date*	Time	In	Date*	Time		

Material **B-RM-00-042** FILM ADHESIVE FM 300M03 AIMS-10-01-006B		Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14	
Ambient Life Left (hour)	222	Out Time Remaining (hour)			Out Time Remaining (hour)			0340	am / pm
Stamp	AC 267 PROD	Stamp			Stamp			Stamp	AC 164 PROD
In	Date* Time	In	Date*	Time	In	Date*	Time		

Material **BBM-006-04** SURFACING FILM SM905M.045 AIMS-10-06-001		Out	Date*	Time	Out	Date*	Time	Time At Oven On 03/02/14	
Ambient Life Left (hour)	202	Out Time Remaining (hour)			Out Time Remaining (hour)			0340	am / pm
Stamp	AC 267 PROD	Stamp			Stamp			Stamp	AC 164 PROD
In	Date* Time	In	Date*	Time	In	Date*	Time		

* Format for date must be **DD/MM/YY**

CTRM AERO-COMPOSITES SDN. BHD.

PA PICKLIST ATTACHMENT

Work Order # :

ID :

Part Number: : V5746705100000

CONCESSION					
Application No.	Concession No.	Description Of Defect	Date	Operator	Inspector

ADDITIONAL DOCUMENT				
No.	Document Number	Description	Date	Person in charge
1.	A350SON-0102- 0200	A350XWB: D. NOSE SOLID LAMINATE TEST PANEL	28/01/14	AC 820 PROD
2.	A350SON-0104- 0250	A350XWB: D. NOSE HC DRUMPEEL TEST PANEL	31/01/14	AC 820 PROD
3	NCR # C-11597	SURFACE PROFILE OUT OF TOLERANCE	09/02/14	AC 69 INSP
4.	PRN # 6024	SURFACE PROFILE OUT OF TOLERANCE	19/02/14	AC 197 INSP
	A350S- 0205 -0024	D-NOSE PANEL 5 ASSY LH	07/04/14	AC 31 INSP

* Format for date must be **DD/MM/YY**

CTRM
Aero-Composites

DETAIL WEIGHT REPORT

Aircraft A350 SONACA DROOP NOSE

Customer		INSPECTION LOCATION	FINAL	Report No: CTRMAC-FAI/SONACA/DN-127
Supplier	CTRMAC			

Date	Part No.	Issue	Serial No.	Description	Total Weight	Unit	Remark	Inspector's Stamp
07/04/2014	V5746705100000	-A.2	0027	BOTTOM PANEL 5 LH	4.7	KG	UN-PAINTED PART	